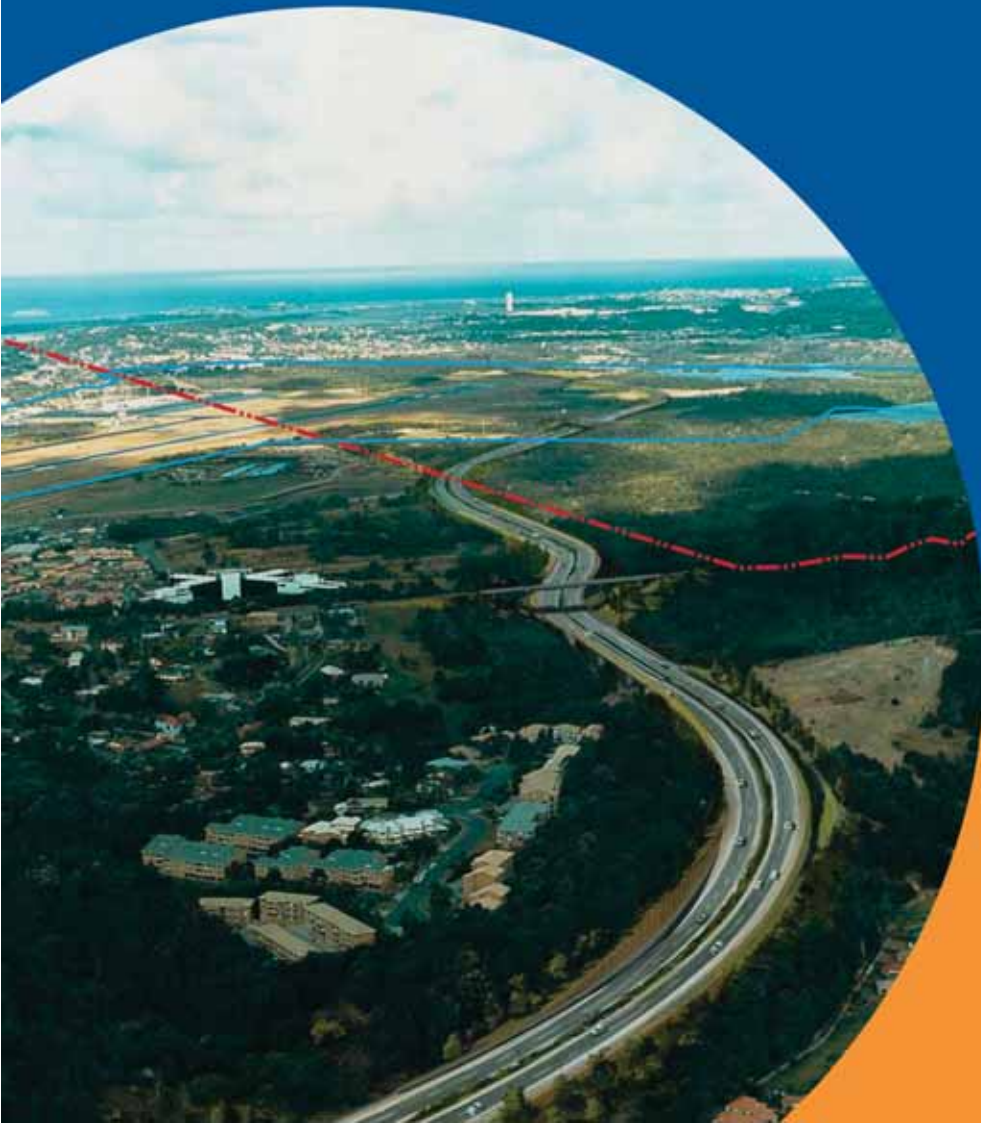


# TUGUIN

B Y P A S S

stewart road to kennedy drive



**Technical Papers**

December 2004

# Tugun Bypass Environmental Impact Statement

## Technical Paper Number 14 Cultural Heritage Assessment



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### Tugun Bypass Alliance

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# 1. Introduction

## 1.1 Summary of the Technical Paper

This technical paper presents the results of a cultural heritage investigation undertaken by Bonhomme Craib & Associates for the proposed Tugun Bypass, from Stewart Road in Queensland, south to Kennedy Drive in NSW. The proposed bypass would traverse land in both Queensland and NSW. It would also pass through the Gold Coast Airport which is located on Commonwealth land. The Queensland portion of the cultural heritage survey was performed under the Environmental Protection Agency Permit Number SE33/EIA/2000, pursuant to Section 28 of the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*. All sites in NSW are protected under the *National Parks and Wildlife Act 1974*. No permit is required to conduct field survey under this Act. The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 – 1986* protects sites on Commonwealth land where State or Territory law does not provide effective protection.

The proposed transport corridor has been divided into two areas based on topography and geology. The northern section at Tugun Heights to about chainage 2,500 is hilly. The southern section, south from chainage 2,500 to Kennedy Drive, is relatively flat and consists of deep alluvial sands.

The following tasks were undertaken during the study:

- a review of literature to identify relevant archaeological, anthropological, historical and other cultural heritage data pertaining to the area potentially impacted by the proposed development;
- search of relevant cultural heritage site registers and databases to compile a list of significant Aboriginal and non-Aboriginal sites and places previously recorded in the area potentially impacted by the proposed development;
- identification of Aboriginal Traditional Owners, Native Title claimants and other Aboriginal interest groups;
- detailed and continued consultation with all relevant groups throughout the cultural heritage assessment;
- relevant cultural heritage field surveys in conjunction with the relevant Traditional Owners to identify and record significant cultural heritage sites;
- determination of the potential impact of the proposal on significant places; and
- preparation of a report presenting the findings together with discussion and recommendations covering the proposal.

The airport area has been the subject of significant earthworks associated with its development and much of the plain along the proposed transport corridor within the airport boundary is artificial rather than the natural surface.

The types of cultural heritage sites found in the general area and within the study area, include a now destroyed bora ground, recorded shell middens and artefact scatters. The general area has received a high degree of disturbance but intact middens survive in the National Estate area. The National Estate midden complex is of particular importance.

As a result of the consultation, the background research and survey, it is clear that the area has the following attributes:

- **Significance to the Traditional Owners.** The informants identified no sites of significance outside the National Estate area with the exception of the location of the now destroyed bora ground, which is outside the proposed transport corridor.
- **Scientific/archaeological or informational significance.** The sites already recorded adjacent to the proposal have little archaeological significance because of the disturbance they have experienced. The exception is the National Estate area.
- **Formal and aesthetic qualities.** The Traditional Owners consulted have indicated that the environment and the sites, which occur, are interrelated and therefore they believe the whole area is significant in terms of Aboriginal issues.

The types of sites found in the general area and within the study area are detailed in Chapter 3.

No issues were identified that impose significant constraints on the proposed development. Few sites are expected to occur in the disturbed areas, which make up the majority of the proposed transport corridor. Shell middens could occur, but they are likely to have been disturbed and examples of this type of site are preserved in the National Estate area. It is possible that any midden sites, which may be found inadvertently, can be managed through consultation and mitigation.

A major constraint to the proposed development would be the discovery of burials. This cannot be predicted from surface inspection or random subsurface testing, however the likely occurrence of burials is rated as low to moderate along the proposed transport corridor.

It is recommended that a cultural heritage management plan be developed prior to any earthworks.

## 1.2 Historic and Proposed Earthworks

The dominant developments in the study area have been the construction and expansion of the Gold Coast Airport and adjacent residential development. Land reclamation and reshaping has been extensive, with material being borrowed, and redeposited elsewhere. Mineral extraction has occurred over the eastern part of the airport land. Most of these areas have since been refilled with material from elsewhere on the airport land. Sand extraction was undertaken on land to the south of the main runway (Gold Coast Airport Limited 1999).

Construction of the proposed bypass would require some vegetation clearing, demolition of existing sections of road pavement at tie-ins, bulk earthworks, the provision of drainage facilities and bridge construction. Construction would also incorporate a road tunnel and components of the rail tunnel traversing the Gold Coast Airport obstacle limitation surface.

The area has already seen earthworks associated with the development of the airport and much of the surface of the plain along the proposed transport corridor within the airport boundary is quite different from its natural state.

Table 1.1 shows proposed activities and an assessment of impacts from previous earthworks along the proposed bypass alignment. The table shows that impacts along

most of the alignment have already been high. Given this, it was expected that few intact sites would be located along the proposed transport corridor.

**Table 1.1: Summary of Proposed Earthworks along the Proposed Bypass Alignment**

Chainage <sup>1</sup>	Distance (m)	Proposed Activity	Level of Previous Impacts	Terrain
0 600	600	Infill	High	Low slope
600–900	300	Cut	High	Steep slopes ridges and valleys
900 1,100	200	Cut	Medium	Low slope
1,100 1,340	240	Infill	High	Slopes
1,340 1,460	120	Cut	High	Steep slope
1,460 1,500	40	Infill	High	Steep slope
1,500 1,620	120	Cut	High	Steep slope
1,620 1,820	200	Infill	High	Steep slope
1,820 1,880	60	Cut	High	Steep slope
1,880 2,040	160	Bridge	High	Steep slope
2,040 2,180	140	Cut	Medium—low	Steep slope
2,180 2,280	100	Infill	Medium—low	Steep slope
2,280 2,500	220	Infill	Medium—low	Steep slope
2,500 3,240	740	Infill	Medium—low	Flat plain
3,240 3,320	80	Cut	Medium—low cleared	Low knoll
3,320 5,060	1,740	Infill	High	Flat plain
5,060 6,740	1,680	Tunnel	Low	Flat plain
6,740 7,120	380	Infill	Medium-low	Flat plain
7,120 m				

Note 1: Chainages referred to commence from the north (Refer to Figure 4.1)

### 1.3 Purpose and Approach

Bonhomme Craib & Associates were contracted to undertake the cultural heritage assessment of the proposed transport corridor. The cultural heritage assessment included the following tasks:

- background research regarding the human history of the area, including Aboriginal heritage;
- application to the Queensland Environmental Protection Agency for a permit to conduct the survey;
- liaison with the relevant Aboriginal community to ascertain whether or not the proposed development activities would impact upon matters of cultural significance;
- a field study of the proposed development site;
- reference to the potential for sites to occur and for subsurface material to be present and a recommended approach to their treatment; and
- a written report summarising the findings of the study.

## 1.4 The Legislation

The proposal passes through Queensland, NSW and Commonwealth land. It is therefore subject to state as well as Commonwealth legislation. Legislation relevant to the Tugun Bypass proposal is described briefly below.

### 1.4.1 Queensland

Cultural heritage in Queensland is subject to two main Acts. These are the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987* and the *Queensland Heritage Act 1992*. The *Queensland Heritage Act 1992* now covers historical items and the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987* is concerned with Aboriginal cultural material.

#### Queensland Heritage Act 1992

The *Queensland Heritage Act 1992* protects places of cultural heritage significance relating to Queensland's non-Aboriginal history since settlement. Protection is offered to places that have been entered on the Queensland Heritage Register, for which criteria for entry are listed in the Act.

#### Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987

In Queensland, the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987* provides the primary basis for legal protection and management of Aboriginal sites. The administration of legislation pertaining to sites is the responsibility of the Queensland Environmental Protection Agency.

Under the provisions of the Act, a person may not take, destroy, damage, deface, excavate, expose, conceal or interfere with an 'item of the Queensland Estate', without authority from the Minister. The provisions of the Act apply to all Aboriginal archaeological sites regardless of whether or not they have been listed on the Register of the Queensland Estate, or whether they occur on privately-owned or Crown land. A permit is required to undertake archaeological field survey, excavation or artefact collection.

### 1.4.2 NSW

#### National Parks and Wildlife Act 1974

All Aboriginal sites and declared Aboriginal places in NSW are protected under Section 90 of the *National Parks and Wildlife Act 1974* (as amended). The administration of legislation pertaining to sites is currently the responsibility of the NSW National Parks and Wildlife Service.

Under the provisions of the Act a 'relic' may not be knowingly disturbed, damaged, defaced or destroyed without written authority from the Director-General of the National Parks and Wildlife Service. The provisions of the Act apply to all Aboriginal archaeological sites regardless of whether or not they have been registered with the National Parks and Wildlife Service, or whether they occur on privately-owned or Crown land.

#### Heritage Act 1977

The *Heritage Act 1977* ensures the non-Aboriginal cultural heritage of NSW is adequately identified and conserved. The Act is concerned with all aspects of



conservation, ranging from basic protection against damage and demolition through to restoration and enhancement.

### **Aboriginal Land Rights Act 1983**

The *Aborigines Act 1969* (NSW) was repealed by the *Aboriginal Land Rights Act 1983* (NSW), and land formerly vested in the Aboriginal Lands Trust was transferred to the relevant Local Aboriginal Land Council or the NSW Aboriginal Land Council. The Act also introduced a mechanism for making claims to certain Crown land. In NSW, Aboriginal land claims do not rely on traditional affiliation with the land. This is appropriate, given the extent to which Aboriginal communities in NSW have been alienated from their land by the process of colonisation.

This type of claim may be lodged only by Aboriginal Land Councils constituted under the Act, with land ownership or title able to be granted only if the claimed land, at the time of the claim, is vested in the State of NSW and is not being lawfully used or occupied or is not needed as residential lands or for an essential public purpose.

The Act recognises the special attachment Aboriginal people have to the land, and puts in place opportunities for them to receive some compensation for their past loss of land. It also provides mechanisms for Local Aboriginal Land Council members to have access to European land for the purpose of hunting, fishing or gathering. This can be done by way of negotiated agreement with the owners of the land or court-ordered permit.

### **1.4.3 Commonwealth**

#### **Australian Heritage Commission Act 1975**

The *Australian Heritage Commission Act 1975* provides for the protection of the National Estate at the Commonwealth level through the identification and listing of places on the Register of the National Estate. Both natural and cultural heritage values are taken into consideration in the listing process. The Act also imposes obligations on the Commonwealth Ministers, departments and authorities to protect places listed on the National Estate Register.

#### **Native Title Act 1993**

The *Native Title Act 1993* became law on 1 January 1994 following the Australian High Court decision in the Mabo case. The Act allows Aborigines and Torres Strait Islanders the opportunity to have recognised continuing common law rights and interests in land still owned by the government. The full onus in providing these rights and interests, however, rests with the traditional Aboriginal owners. Applications under this legislation may be lodged by individual Aborigines, couples, family groups, tribes for instance who would seek to have their continuing rights or interests recognised. The Act also provides a process for others wishing to validly deal with government land to have continuing Aboriginal rights or interests/native title in lands identified.

#### **Aboriginal and Torres Strait Island Heritage Protection Act 1984 - 1986**

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984-1986* is to preserve and protect from injury or desecration, areas and objects that are of particular significance to Aboriginal people in accordance with Aboriginal tradition. The Act was introduced in 1984 to enable the Commonwealth to protect significant Aboriginal areas and sites when State or Territory law does not provide effective protection.

Aboriginal and Torres Strait Islanders can ask the Minister to make a declaration to protect an area or object that is under threat of injury or desecration.

### **Airports Act 1996**

Under section 132 (i)(d) of the *Airports Act 1996*, the regulations may make standards and impose requirements that are to be complied with in relation to, the prevention and minimisation of interference with sites of significance to Aboriginal and Torres Strait Islander people.

### **Airports (Environment Protection) Regulations 1997**

Under section 4.04 (i)(a) of the regulation, the operator of an undertaking at an airport must take all reasonable and practicable measures to ensure that, in the operation of an undertaking, and in the carrying out of any work in connection with the undertaking, there are no adverse consequences for.... (ii) existing aesthetic, cultural, historical, social or scientific (including archaeological and anthropological) values in the local area, and (b)(ii) sites of Aboriginal significance for the airport site.

Regulation 4.05(1) states that the operator of an undertaking at an airport, who is in the course of operating the undertaking, or carrying out working connection with the undertaking, discovers amongst other matters, a site of heritage value or a site of significance to Aboriginal or Torres Strait Islander people, that indicates that the site of the undertaking, or other work, is a site of previously unrecognised significance, must give written notice of the discovery to the airport-lessee company for the airport and the airport environment officer.

Regulation 4.05(2) states that an airport-lessee company or airport environment officer, receiving notice of sites of heritage value of significance to Aboriginal or Torres Strait Islander people must:

- a) seek expert advice from an appropriate person on appropriate conservation measures (if any); and
- b) consult with the operator of the undertaking about reasonable means of giving effect to the recommended measures; and
- c) record the discovery in the environmental site register for the airport, kept under subregulation 6.02(3).

Regulation 4.05(3) defines an appropriate person for subregulation 4.05(2)(a) as the Commonwealth Department of the Environment or a body established in the state in which the airport is located, having responsibilities in relation to conservation of local biota, habitat, heritage or kindred matters.

## **1.4.4 Native Title Claim and Aboriginal Land Claims**

### **Native Title**

As of June 2004, there are no active native title determination applications, determination of native title or Registered Indigenous Land Use Agreements for the Tugun Bypass area (National Native Title Tribunal website).

### **Aboriginal Land Claim**

An Aboriginal Land Claim (3093) has been registered on behalf of the Tweed Byron Local Aboriginal Land Council. The claim covers NSW Crown Land as shown in Figure 1.1 and includes:

- Lot 56 DP755740;
- Lot 57 DP755740;
- Lot 58 DP755740 (2 sections); and
- Lot 321 DP755740.

Ms Margaret Weiss (Principal Case Manager, Aboriginal Land Claim Investigations – Department of Lands) was contacted in April 2003 regarding the current status of the land claim. She advised that on 16 September 2002 the Minister refused about 7.1 ha of Claim 3093 on the grounds that it was needed or likely to be needed for the essential public purpose of access to residential lands. This is the parcel of land separating Lot 58 from Lot 321 (shaded as yellow on Figure 1.1). The remainder of the claim being Lots 56, 57, 58 and 321 DP755740 are still to be determined.

## 1.5 Consultation

### 1.5.1 Consultation Plan

A community consultation plan was developed for the Tugun Bypass project. This plan formulated, implemented and managed the broad community involvement for the duration of the project. The plan sought to involve the landowners, community and agency representatives extensively through information meetings, open days and the preparation and distribution of community information sheets. Public consultation and community involvement throughout the course of the project is detailed in Technical Paper Number 1.

Two other projects have considered proposed development of the airport area (Hall 1990a) and the preferred alignment options (Collins 1999). Consultation by Collins has been considered in this report, as the comments are directly relevant to the proposed work.

Contact with Aboriginal representatives had been initiated during the early planning phases of the project through the community consultation program and through individual consultation with known interested parties. Cultural heritage interests were further developed during the cultural heritage assessment program through direct contact (phone, meetings and survey) with individuals and communities who were known to have an interest (such as Native Title claimants) and those who had expressed an interest (Traditional Owner groups and individuals).

### 1.5.2 Aim and Objectives

**Aim:** To ensure that representatives from special cultural heritage interest groups and other individuals are provided with facilitated opportunities to contribute to the route development process.

**Objectives:**

- to provide an opportunity for interested parties to become aware of route development;
- to provide interested groups/individuals with the opportunity to become aware and to discuss the design concept and implications;
- to provide all interested parties with the opportunity to question the cultural heritage team regarding the issues involved;

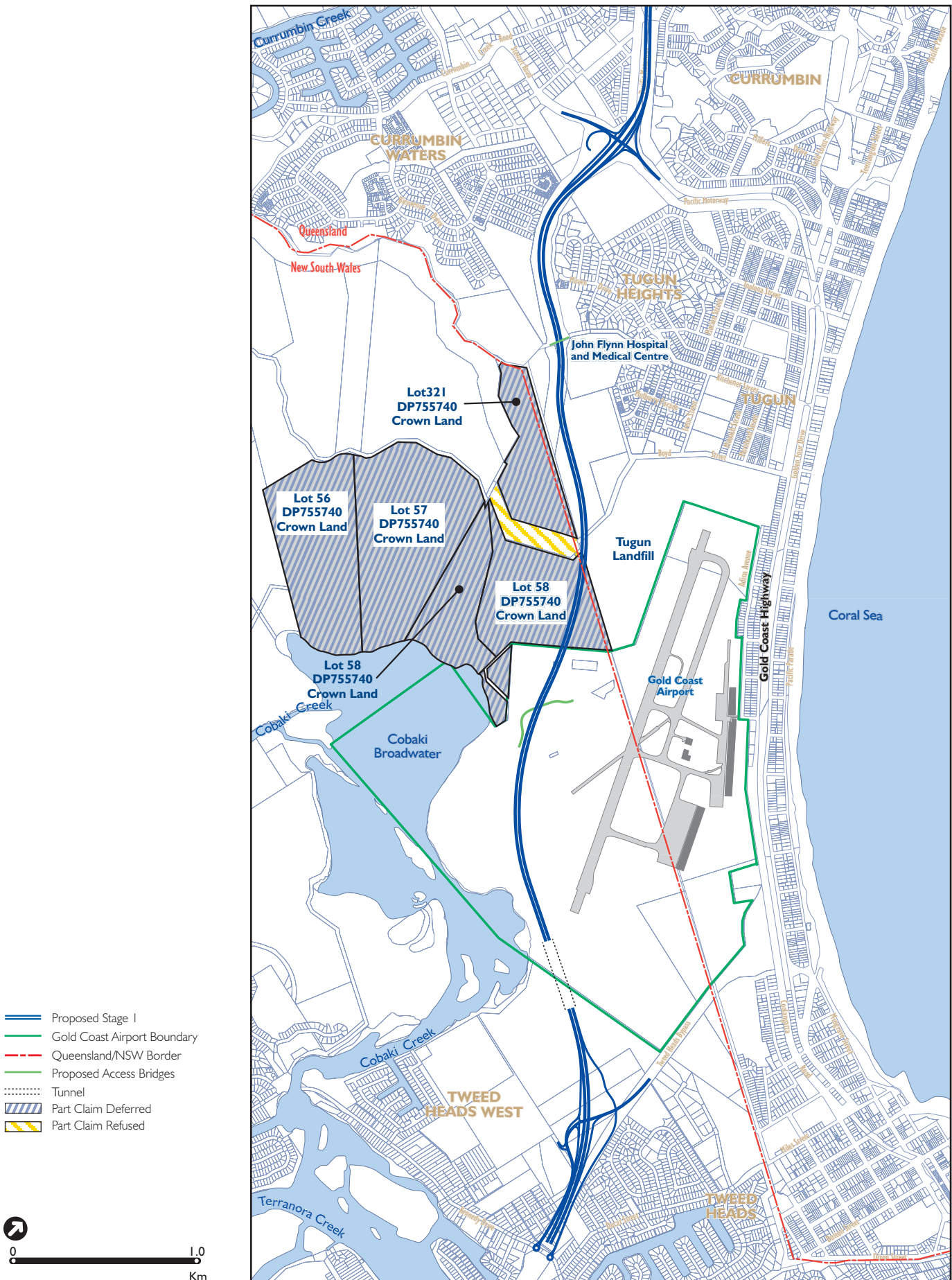


Figure 1.1 Area Covered by Aboriginal Land Claim (Number 3093)

- to develop community confidence in the consultation process; and
- to provide a mechanism where by the community can provide direct comment on cultural heritage issues.

### **1.5.3 Stakeholder Representation**

Representatives of the following organisations have been involved in the cultural heritage consultation:

#### **Queensland**

- Queensland Environment Protection Agency (Cultural Heritage);
- Queensland Department of Main Roads;
- Kombumerri Aboriginal Corporation for Culture Yugambah Museum, Language and Heritage Research Centre (Kombumerri Aboriginal Corporation);
- Kalwun Development Corporation;
- Ngarang-wal Aboriginal Land Council; and
- Gold Coast and Hinterland Historical Society (Local Historical Collection).

#### **NSW**

- NSW National Parks and Wildlife Service, Department of Environment and Conservation (Cultural Heritage Registrar);
- NSW Roads and Traffic Authority (Aboriginal Program Consultant);
- Tweed Byron Local Aboriginal Land Council;
- Pooningbah Community Aboriginal Corporation, through the Tweed Byron Aboriginal Land Council;
- Nganduwal Language Group also known as the Moorung Moobah Traditional Owners; and
- Tweed Heads Pony and Hack Club.

Searches of on-line heritage lists, including NSW Heritage Office and National Estate, and research at the local History Library at Southport revealed that there was no known historical material along the proposed corridor. As such formal consultation with the NSW Heritage Office on non-Aboriginal heritage issues was not required.

Traditional Aboriginal dialect groups for the study area as estimated by Crowley (1978) are shown on Figure 1.2.

### **1.5.4 Consultation During Route Selection Process (1999)**

The comments in Table 1.2 were made by Traditional Owners consulted during the route selection study in 1999. As part of this route selection process, Traditional Owners were asked to comment on a number of alignment options, of which C4 was later selected as the preferred alignment. The comments in Table 1.2 are therefore based on several alternative alignments being presented to Traditional Owners as opposed to a preferred alignment option.

**Table 1.2: Aboriginal Groups Consulted During the Route Selection Process in 1999**

Contact	Group	Comment
Ysola Best	Kombumerri Aboriginal Corporation	All sites are significant regardless of condition. Does not support C4 alignment.
Pat O'Connor	Kombumerri Aboriginal Corporation	Endorsed above and agreed to field a representative for the survey of the C4 alignment in 2000.
David Dillon	Ngarang-wal	Concerned about impact of C4 alignment on sites and the natural environment. Requested continued involvement. Attended meetings in 2000 to discuss the process.
Sites officers	Tweed Byron Local Aboriginal Land Council	Recorded middens to be protected. No objection to C4 alignment if known sites are protected.
Joyce Summers	Minjungbal Elder	Gold Coast Airport locality was a well-known 'big camping area'. Noted the existence of the bora ground. Provided middens are not disturbed she had no objection to the C4 alignment. She was concerned that burials might be located and indicated that if they were discovered they should be covered over and spared further disturbance.
Franc Krasna	Pooningbah Community Aboriginal Corporation	The C4 alignment may affect the Cobaki Broadwater environment. Due to these concerns for the natural environment he does not support the western alignment option.

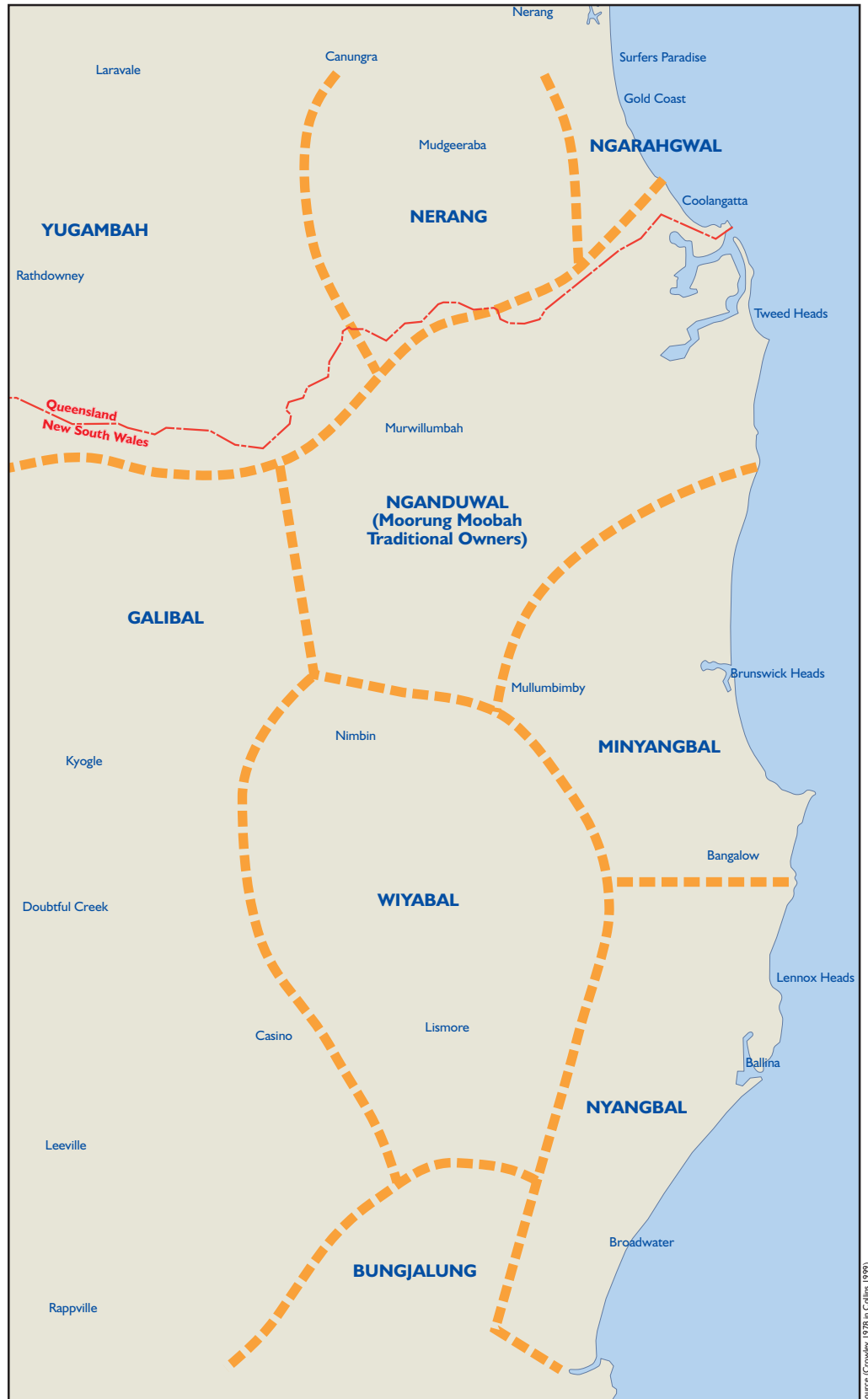
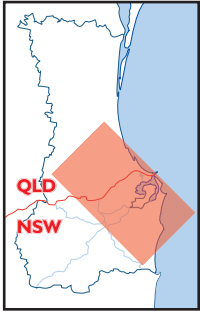
Source: (Collins 1999: 26-28)

### 1.5.5 Community Contact

A database of interested individual stakeholders and government agencies was established as part of the consultation process. Project information sheets containing a freecall number were widely distributed. Relevant names from that consultation were forwarded to Bonhomme Craib & Associates for further direct contact.

A letter describing the project and providing maps and contact details was sent to those organisations in the database. This included the Aboriginal communities and government agencies. The initial contact invited comment and participation in the cultural heritage assessment process. The letters were followed with phone calls and where requested, individual meetings as described below.

- Discussions were held on 16 August 2000 with Hague Best (Site Officer, Kombumerri) and information was sent to Pat O'Connor (Secretary, Kombumerri). On 14 August 2000 Mrs O'Connor was contacted by phone. The Kombumerri agreed to field a representative for the Queensland section of the survey.
- On 28 August 2000 David Dillon (Ngarang-wal) was provided with written information followed by a meeting. He agreed to participate in the Queensland section of the survey. Unfortunately a car accident prevented him from doing so. He tried to arrange a replacement but the person did not attend. On 4 October 2000, Dr Craib (Bonhomme Craib & Associates) provided a phone briefing for Mr Dillon, who was still in hospital. Mr Dillon was aware that his representative had not been able to attend and said he was satisfied with the briefing.
- The Tweed Byron Local Aboriginal Land Council received written information followed by a meeting on 1 August 2000 with Clarence Phillips (Chairman). At that meeting Mr Phillips undertook to provide all information to the relevant Pooningbah Traditional Owners, as they were part of the Land Council structure.



- - - Queensland/NSW Border  
 - - - - - Estimated Yugambeh-Bungjalung Dialect Boundary  
 ↻  
 NOT TO SCALE

Figure 1.2 Reported Aboriginal Dialect Groups in the Study Region

- The Tweed Byron Local Aboriginal Land Council fielded two representatives, George Scott and Mick Leon for the NSW section of the survey. Mr Phillips has said that the Tweed Byron Local Aboriginal Land Council is prepared to be involved in the cultural heritage analysis process and to participate in the development of a cultural heritage management plan for any cultural heritage material that might occur.
- Jacki McDonald (representing the Nganduwal Language Group also known as the Moorung Moobah Traditional Owners), participated in the community information workshop. She was later contacted and invited to comment on cultural heritage issues. She agreed to contact Traditional Owners and to research the group's archive records to provide information on the area. She also attended Community Focus Group Meetings on 6 September 2000 and 23 October 2000.
- An on-site meeting was held on 27 November 2000 at the Tweed Heads Pony and Hack Club with Jacki McDonald, Claude McDermott and Jason McDonald to discuss the project. During this meeting Claude McDermott recalled that as a young boy he visited his grandmother who lived in a humpy near the Tweed Heads Pony and Hack Club area. He also said that in particularly hard times his father would hunt and fish to provide food for the family. Jacki McDonald reminisced about local tucker, which formed part of her diet as a child. Specifically she mentioned Lillypillies and Midginberries. Since this meeting Claude McDermott has become an Aboriginal Heritage Officer with the NSW National Parks and Wildlife Service.
- Jacki McDonald (Nganduwal Language Group) has expressed concern that there may be undiscovered material along the route. She did not support the development for environmental and cultural heritage reasons. However, in March 2001 she indicated her willingness to arrange for a representative to participate in a meeting to discuss the project further and to consider and discuss the proposal to develop a cultural heritage management plan for the development.
- Dr Craib discussed the project in the field with Mr Doug Cornwall (President, Tweed Heads Pony and Hack Club). He said that during a recent open day for the club, two Aboriginal women had attended the event. He suggested that Lindy Smith (Secretary, Tweed Heads Pony and Hack Club) could provide the names of these people. Ms Smith was contacted by phone and provided the names Desiree Rotumanh and Kelly Lind. The Tweed Byron Local Aboriginal Land Council was contacted by phone with a request to provide these people with Bonhomme Craib & Associates contact details. No response has been received to date.
- Representatives of the Ngarang-wal, Tweed Byron Local Aboriginal Land Council and the Kombumerri Aboriginal Corporation were invited to participate in the survey of the relevant Queensland or NSW section of the route. David Dillon of the Ngarang-wal, Hague Best of the Kombumerri and Mick Lean and George Scott were nominated by their groups to participate in the survey,
- Liam Dagg (NSW National Parks and Wildlife Service) was telephoned on 7 September 2000 to discuss an upcoming meeting. Other phone discussions were held with Liam Dagg as required.
- On 14 August 2000 Mary Lou Buck (Cultural Heritage Officer, NSW Roads and Traffic Authority) was contacted by phone and information was mailed to her.



- On 15 August 2000 Jennifer Miller (Gold Coast Airport Limited), Liam Dagg (NSW National Parks and Wildlife Service) and Clarence Phillips (Tweed Byron Local Aboriginal Land Council) were phoned to discuss reports of possible burial/s in the vicinity of the Tweed Heads Pony and Hack Club. Calls were also made on 21 August 2000 and 24 August 2000 regarding information on the burial/s. No precise details were forthcoming.
- A Value Engineering and Risk Management (VERM) Workshop was held at Coolangatta on 11 and 12 September 2000. Dr Craib attended.
- Calls were made to Clarence Phillips (Tweed Byron Local Aboriginal Land Council), David Dillon (Ngarang-wal) and Hague Best (Kombumerri) regarding the upcoming survey for 22 September 2000. Calls were made on 19 October 2000 to the Tweed Byron Local Aboriginal Land Council regarding historical Aboriginal issues.
- Jacki McDonald (Nganduwal Language Group) was contacted on 7 November 2000 regarding the project.
- An Option Review meeting was held on 7 November 2000 at the Queensland Main Roads office at Nerang and Dr Craib attended.
- Theresa Bonhomme with Danny Eatock of airport management undertook a reconnaissance survey of Gold Coast Airport land on 30 August 2000.
- A letter was sent (November 2000) to each Aboriginal representative groups indicating that the draft report was being prepared and asking for advice on any issues that require comment. The Kombumerri responded that the need for monitoring during clearing and on going consultation during construction were of great importance. No other responses have been received to date.
- A copy of the draft report was sent to the Traditional Owner groups (20 March 2001). Comments were received from Ysola Best (Yugambah Traditional Owner) and Jackie McDonald (Nganduwal Language Group)
- Ysola Best (Yugambah Traditional Owner) commented that the Best family formerly resided at Ukerebagh Island. They were driven out in 1919 by the flu epidemic. They retain a connection to the area, which is not bounded or restricted by borders or fences (Ysola Best pers. comm. 2001).
- Ms Best said that her previous comments (Collins 1999) referred to the route selection process, where several alternatives were presented to her. Her present position is that the current route must avoid the National Estate area.
- Jackie McDonald (Nganduwal Language Group) reiterated the significance of the area due to the historical presence of a camp which was well documented by early explorers who saw the camp fires. She restated the presence of the bora ground and scarred trees and that her uncles had earlier encountered artefacts in the study area and expected the presence of burials and more artefacts. She indicated the need for monitoring during project.
- A meeting was held with Pat O'Connor (Kombumerri), Ysola Best (Kombumerri), Theresa Bonhomme, Maria Tegan (Main Roads), Neil Wright (Main Roads) and Hugh Donaldson (PB) on 31 May 2001. At this meeting the draft recommendations for the cultural heritage technical paper were discussed, including proposed mitigation measures if burials were found.
- A meeting was held with Graham Dillon (Kalwun Development Corporation), John Craib, Maria Tegan (Main Roads) and Hugh Donaldson (PB) on 7 November 2001.

The presence of a 'dancing ground' was raised, Graham was pleased to see that the proposed road corridor avoids the dancing ground.

- Each Aboriginal representative group was contacted concerning advice in relation to the draft report. No further comments were forthcoming.
- A meeting was held with Pat O'Connor (Kombumerri), Ysola Best (Kombumerri), Theresa Bonhomme, John Craib, Kent Kieseker (Main Roads), Dan Grundy (Main Roads) and Maria Tegan (Main Roads) on 11 April 2003. At this meeting the current status of the project was discussed. It was also determined that a cultural heritage management plan would be prepared by Maria Tegan in consultation with Pat O'Connor and Ysola Best for the Queensland portion.
- A meeting was held with Graham Dillion (Kalwun Development Corporation), John Craib, Kent Kieseker (Main Roads), Dan Grundy (Main Roads) and Maria Tegan (Main Roads) on 14 April 2003. At this meeting the current status of the project was discussed. Graham Dillion voiced his backing for the project and that he was keen to see revegetation occurring along the route of the bypass (particularly with food and resource plantings).

### **1.5.6 Route Refinement Workshop**

Bonhomme Craib & Associates provided written information regarding the potential risks associated with the proposed C4 transport corridor (Table 1.3). The following variables were used in determining levels of cultural heritage sensitivity for the various corridor sections:

- proximity to water;
- general topography;
- vegetation;
- previous disturbance;
- soils; and
- predictive background (that is where sites have been found in similar environments). Collins (1999) and Hall (1990a) have considered the area previously and their comments have been incorporated.

A five-stage ranking system was used to evaluate the various corridor sectors. These rank the archaeological sensitivity (the probability that cultural materials would be present in a given area) from high (level 1) to low (level 5). This information was used as a guide to the consideration of the risks associated with the proposed C4 corridor. Several general observations were made regarding the locations of sites:

- most of the area has been cleared and while regrowth occurs there are few trees of sufficient age to have scarring of Aboriginal origin;
- other studies indicate that coastal embayment and dune systems such as this usually have sites along the coast and on the first high dune above the inland wetlands. Sites between are limited to small scatters of material usually focussed on a water source or wetland;
- the ridge tops in the north-west sector have been disturbed along the road reserve. Subsurface material is unlikely to occur. Artefact scatters have been reported in the wider region on ridge tops. Artefact scatters usually occur on level to slightly sloping terrain. Therefore steep slopes are not expected to contain such sites;

- locations adjacent to watercourses were rated as having high archaeological potential. Fresh water is likely to occur randomly in swales in the dune system, these would be localised features with a high probability of sites occurring. It is difficult to predict where such water sources might have been; and
- bora grounds are usually situated in areas, which can support a number of people for a period of time. They are usually close to a reliable water source. The food resources of the Cobaki Broadwater and the coastal zone are within 1 km of the bora ground location on Boyd Street.

**Table 1.3: Route Refinement Workshop Cultural Heritage Ranking of Route Sectors**

Sector Location	Rank 1- High; 5 - Low	Topography	Geology	Disturbance	Recorded Sites	Possible Extant Sites
Stewart Road to Mirreen Road	5	Hillslope ridge top foot slope	Siltstone, shale, sandstone, volcanic	Previous clearing and excavation	None	Scarred trees; stone artefact scatters, isolated artefacts.
Mirreen Road to Boyd Street	3	Coastal plain mangrove lowlands	Sand	Clearing, pastoral	Destroyed bora ground c500 m north	Scarred trees, artefact scatters.
Boyd Street to Tugun Landfill	4	Coastal plain	Sand	Clearing, sand removal	None	Middens, stone artefact scatters, isolated artefacts.
Tugun Landfill to airport boundary fence	1	Coastal Plain Dune system	Sand	Clearing, excavation infill	Near components 1, 2, 3 (Hall 1990a) and National Estate precinct	Middens, stone artefact scatters, isolated artefacts
Southern airport boundary to Kennedy Drive	4	Sand plain	Sand	Sand extraction, clearing, drain construction	None	Isolated artefacts

## 1.6 Issues

Aboriginal groups and individuals consulted raised the following issues during the cultural heritage assessment:

- the general area was known to be a gathering place and an important food resource area, therefore the area is important to local Traditional Owners;
- a bora ground was known to have been located on Boyd Street and its existence was evidence of periodic large gatherings. The existence of this bora ground is well known locally. It was destroyed during subsequent road development (Jacki McDonald pers. comm.) However the area retains its significance to the Traditional Owners;

- there is anecdotal information regarding the presence of a grave/graves in the vicinity of the Tweed Heads Pony and Hack Club at the southern end of the route. Although extensive enquiries were made by Liam Dagg (NSW National Parks and Wildlife Service) and Bonhomme Craib & Associates only a reference to a location near an abandoned house near the Tweed Heads Pony and Hack Club was determined. This area was inspected but no evidence of graves was found. However the general opinion of the Traditional Owners was that the potential for grave sites in the general study area was high;
- the mangrove fringe around Cobaki Broadwater contains known and recorded middens, some of which lie in the National Estate area. Aboriginal informants (Jason McDonald and Jacki McDonald) believe that middens potentially could extend east of the present mangrove line and would be affected by the proposed corridor. However the eastern boundary of the mangrove fringe is less than 100 m in some instances from the airport area, which has undergone significant changes from the beginning of the development of the airport. It is unlikely that intact middens would be located in the disturbed areas;
- there was expressed concern that due to the poor visibility in some areas that reliance on the surface inspection alone does not adequately address the issue of buried material. Further testing and monitoring at the time of clearing were raised as important activities that would need to occur prior to any earthworks;
- Ysola Best reported that the Kombumerri Aboriginal Corporation Museum contained thousands of stone artefacts that have been collected in the Gold Coast area. One of these collections was undertaken in the 1960s by amateur archaeologists and the local scout groups. Almost every visible stone was collected particularly around the John Flynn Hospital and Medical Centre area (Ysola Best pers. comm. 2001). The absence of surface artefacts in this area may be a reflection of the collecting activity undertaken by these early enthusiasts;
- the issue of accessibility to the project team during proposed earthworks was raised. Aboriginal informants wanted to be assured that a process was in place to adequately address concerns or issues that might arise during any earthworks. A recommendation regarding this issue is made in Chapter 5; and
- the issue of confidentiality of information was raised. Assurances were given that as far as was practicable, confidentiality would be maintained.

## 1.7 Significance of Sites

There are many recorded sites in the region. These are a valuable heritage resource. They include individual sites, complexes of associated sites and regions where particular events or activities occurred and may still occur. Others have important associations for Aboriginal people because of the items they contain or the events that have occurred there. Most contain information that can lead to a better understanding of the past.

One important cultural value conferred upon an object or location is that it is a real and direct link with the past. That such contacts are often incomplete and imprecise does not make them any less valuable to a community.

As a discipline, archaeology attempts to overcome these shortcomings by recognising that objects often carry information about the past beyond their own immediate

meanings. It follows that we should try to preserve and conserve objects and information that add meaning to our sense of who we are.

There is, therefore, a range of groups with interest in preserving the past. Groups, or even a society in general, may have other social, religious, political and psychological reasons for preserving the past.

At least four types of cultural value in material objects have been identified.

These are:

- **aesthetic value** – this value has little to do with the age of the object. Aesthetic value often outweighs other cultural values in the eyes of the public;
- **economic value** – this ranges in individual cases from the price an object would bring on the market to considerations of the tourist dollars it might attract. It also relates to questions of the relative economic value, when choices have to be made, for example between preserving a suite of sites or developing the area;
- **information value** – this is the value that most often concerns archaeologists. Data retrieval through excavations and analysis can mitigate loss. Often it is only this information obtained from archaeological sites and the artefacts they contain, which enables us to make a judgement whether the heritage value of these things should be preserved or make way for development; and
- **associational or symbolic value** – a widely perceived value of sites, artefacts or locations in an associational or symbolic context lies in their ability to foster group identity.

Criteria for the assessment of site significance must be determined in relation to what information each site may provide about the people that created them. Additionally, in order to investigate and understand the traditional use of a landscape, all portions of a region must be investigated, even areas where only a few small shallow sites are found.

Today when sites are found, the consulting archaeologist must include in the survey report a significance evaluation for each site found. In the assessment of significance, the archaeologist must find that sites meet one or more of the following accepted criteria for significance (Sullivan and Bowdler 1984):

- the site may have an association with events that have made an important contribution to the broad patterns of Australian history;
- the site may be associated with famous people;
- the site or complex of sites may be an excellent example of a particular type of site. This does not imply uniqueness or rarity. It simply means that the site is a good representative of that kind of site. 'Good' or 'representative' means that it has most of the characteristics expected of that kind of site that demonstrate aspects of the use of the site and landscape;
- the site is rare or unique. A site may fall into this category because the behaviour that produced the site occurred rarely or only once or it is the only site of that type at that location or in a particular landform. A site may also be rare or unique because all other examples of its type have been destroyed;
- the site has yielded, or is likely to yield information important for research on prehistory. Most Aboriginal sites contain some information that is useful for research;

- the sites have traditional cultural significance to Aboriginal people. Burials and burial grounds, religious sites, and traditional cultural places are culturally significant sites. Traditional cultural places can include landforms associated with mythological beings or events. They can also be mundane locations like plant gathering or fishing areas. Traditional cultural places usually have a value that is unique to Aboriginal people and are considered significant regardless of their present condition, or the presence or absence of physical remains; and
- the site has an educational or broader community value. Sites that are considered good examples of a type of site or behaviour, which are in accessible locations where people from the wider community could benefit from their interpretation, fall into this category. The midden complex in the National Estate area is an example of a site, which provides an education or broader community value.

### 1.7.1 Significance of Known Sites in the Study Area

As a result of the consultation and the background research that has been undertaken it is clear that this study is concerned mainly with three levels of significance.

- **The significance of the area to the Traditional Owners.** Those people who have an understanding of the traditions and beliefs of their culture can determine this significance. It is not a value that can be decided by the archaeologist. Such significance may depend on knowledge rather than physical evidence. One example is the known location of a bora ground. The existence of the bora ground is proof to Traditional Owners that the location was of great significance, spiritually and politically and despite the fact that the physical evidence has been destroyed that significance remains.
- **Scientific/archaeological or informational significance.** This type of significance is an assessment of the site's potential to describe or explain past behaviour. The assessment is made with regard to current knowledge and data retrieval methods but also considers the scientific developments that may occur in the future. Sites have particular potential if there are few other sites which can contribute similar types of information, if they are in a good state of preservation, usually in an undisturbed condition, if they provide a chronology and if they display a relationship with other local sites (NSW National Parks and Wildlife Service 1997: 26–28).
- **Formal and aesthetic qualities.** This relates to the role of a site in its environment. It encompasses a range of aspects including form and materials and the relationship between the various parts of the site and its setting. This value is often expressed by Traditional Owners who have indicated that the environment the sites occur in are interrelated and therefore they believe the whole area is significant in terms of Aboriginal issues.

### 1.7.2 Summary of Significance

The types of sites found in the general area and within the study area are detailed in Chapter 3. Of particular importance is the material (recorded by NSW National Parks and Wildlife Service, Department of Environmental Conservation as Site Number 4–2–39) which is the National Estate midden complex. It has outstanding value to the local Aboriginal community as an educational resource and has intact cultural deposits, which have considerable archaeological research potential. It is also the only estuarine

midden complex on the Tweed, which still retains much of its former environmental context.

This material and the known sites which flank the Cobaki Broadwater to the west of the National Estate precinct are excluded from the proposed transport corridor development area but other sites in the study area can be considered in association with this complex.

For example, other sites such as those recorded by Hall (1990a) and Collins (1999) in their surveys of Gold Coast Airport are important as they probably represent an extension of the land use exemplified in the National Estate material. They have an association with the in situ middens. However they occur in highly disturbed contexts especially within the airport boundaries and are generally assessed as having low scientific/archaeological significance. Hall (1990a: 13) considered that the 'general lack of provenance (that is unknown derivation and original context)' displayed by artefacts in the airport area did not support a statement of significance.

The Traditional Owners consider all the sites to be of high cultural/social significance. In their understanding, the artefacts and middens whether in situ, disturbed or displaced, reflect generations of use by their forebears and all form an integral part of the cultural landscape, which is considered worthy of protection and preservation (Collins 1999: 27 and 41).

The interrelationship of the material was recognised in discussions with Jacki McDonald who pointed out that had the general environment not been capable of supporting large numbers of people for long periods, the bora ground would not have been located there, nor the middens. It is well known that bora grounds were located in areas and at times where staple foods such as Bungwall Fern, molluscs or mullet and fresh water were in abundance. The food resources then were seen as integral to supporting the social and political structure of the time, which is evidenced by the presence of a bora ground.

The concept of the importance of the connection between resources, location, spiritual, political and social life is the most difficult to manage in the context of development. It is the one requiring the most respect and consideration. Consultation in this project has therefore been designed to discuss such matters and to try to identify the perceived impacts of the proposed development on these values.

## 1.8 Surveys and Inspections

The Queensland portion of the cultural heritage survey was performed under the Environmental Protection Agency Permit Number SE33/EIA/2000, pursuant to Section 28 of the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*.

All sites in NSW are protected under the *National Parks and Wildlife Act 1974*. No permit is required to conduct field surveys under this Act.

Surveys and reconnaissance walks were undertaken on the following dates:

- 30 August 2000 Theresa Bonhomme within airport land, foot and vehicle inspection of terrain;
- 2 October 2000 Queensland portion; 100 percent foot survey of proposed corridor with Traditional Owner representatives;

- 3 October 2000 NSW portion; 100 percent foot survey of proposed corridor with Traditional Owner representatives;
- 27 November 2000 reconnaissance of Tweed Heads Pony and Hack Club land on foot and vehicle in vicinity of proposed corridor and vehicle reconnaissance from public roads of the northern route section including Boyd Street with Traditional Owner representatives; and
- 6 June 2001 inspection of the proposed Tugun Bypass alignment between the southern airport boundary fence and the Tweed Heads Bypass for surface scatters and scarred trees.

The results of the surveys and reconnaissance walks are presented in Chapter 4 of this report.

## **1.9 Reporting of Study Findings in the EIS**

The studies for the Tugun Bypass environmental impact assessment commenced in 2000. In the subsequent four years the results of the various studies have been used to refine the concept design of the proposal. Further studies were also commissioned to ensure that all aspects of the various environmental issues were fully understood.

The long time period of the assessment has meant that the content of some of the earlier reports has been superseded by newer work. Changes to the design of the bypass have also been introduced to take account of these studies.

In the event that there is a contradiction between the technical papers and the text of the EIS, the EIS takes precedence as it reports the current understanding of issues, impacts and the concept design.



## 2. The Study Area

### 2.1 Topography

The study area is located on flat coastal sand plain that previously contained many small lakes and wetlands. Prior to European development the plain was edged by fore dunes along Bilinga beach and featured extensive pockets of freshwater wetlands (Longhurst 1996).

Figure 2.1 is a 1946 aerial photograph of the study area. Gold Coast Airport was under construction and did not extend over the area it presently occupies. The original dune plain with dense vegetation and small freshwater wetlands is plainly visible. The proposed transport corridor has been superimposed on this photograph.

Unfilled parts of the plain in the vicinity of Gold Coast Airport rarely rise above 6 m Australian Height Datum (AHD). The airport precinct includes a significant part of Coolangatta Creek, which drains a catchment of about 3.7 km<sup>2</sup> commencing in the hills behind Tugun and extending to the hills behind Kirra. The creek flows to the south behind what used to be the frontal sand dunes and crosses to the coast at Kirra. The creek and its catchment have been substantially modified from their natural state. The catchment is now almost completely urbanised and apart from some areas within the airport, the creek has been piped or channelised along most of its length (Collins 1999).

The Cobaki Broadwater stretches along the southern airport boundary before draining into the Tweed River through Terranora Creek. A bank of extremely low and poorly drained land fringes Cobaki Broadwater, which increase in extent in the south-east beyond the southern end of the main airport runway (Collins 1999).

Bedrock ridges and spurs fall coastward from the McPherson Range and terminate in rocky coastal headlands at Burleigh, Currumbin and Coolangatta. North-west of the airport at Tugun Heights the road reserve corridor crosses one of these ridges.

The coastal plain east from Cobaki Broadwater is composed of Holocene outer barrier marine and estuarine sands while clay-soil ridges at Tugun Heights are based on the thinly bedded shales, mudstones, siltstones and sandstones of the Neranleigh-Fernvale Group. The Neranleigh-Fernvale rocks have been extensively deformed making them generally unsuitable for Aboriginal stone tool production (Collins 1999: 9).

### 2.2 Geology

The major structural element in the region is the Beenleigh Block, which forms the coastal corridor approximately 20 km wide and extends from Beenleigh to Ballina. The dominant rocks within the Block are the Palaeozoic sediments and Metamorphics of the Neranleigh-Fernvale Beds.

Volcanic rocks including basalt, trachyte and rhyolite of the Tweed Shield Volcano known as Lamington Volcanics, occur on a ridge within 2 km of the Broadwater along Cobaki Creek. Basalt flows from the Tweed Volcanic activity during the tertiary period formed the easterly striking ridges predominantly west and south of the airport and at Mt. Woodgee (Collins 1999: 9).



Figure 2.1 **1946 Aerial Photograph with Proposed Tugun Bypass Transport Corridor Super-Imposed**

Creek and river channels with estuarine deposits of silts, sands and clays intersect the entire area. To the west of the airport, Reedy Swamp and the Cobaki Broadwater form very low lying areas consisting of estuarine deposits (Gold Coast Airport Limited 1999).

## **2.3 Vegetation**

Remnant vegetation communities remain in the south-west near the mangrove-fringed Cobaki Broadwater. The remnant natural plant communities on the airport include rainforest, mangroves, wetland forest, eucalypt forest, and shrub heath and herb fields. The vegetation represents a subset of the Coastal Lowland vegetation that once extended from Coffs Harbour to Gladstone (Gold Coast Airport Limited 1999).

The drainage impeded flats at the southern end of the main runway have saltmarsh, reeds and casuarina regrowth, while the flats backing the Broadwater further north support wetland sclerophyll forest and lowland rainforest. As noted by Hall (1990a: 6) these forests are rich in plants known to have been used by local Aboriginal groups. These include Lillypillies, Midginberries, Native Yams, Matrush, Bungwall Fern, Native Figs, palm buds and Paperbark.

The steep sided ridge system at Tugun Heights is vegetated by probably regrowth forest dominated by Blackbutt (Gold Coast Airport Limited 1999).



### 3. Aboriginal and Non-Indigenous Archaeological Context

#### 3.1 Aboriginal Heritage

High population densities existed among the Aboriginal groups inhabiting south-east Queensland prior to the arrival of the Europeans (Hall 1986). The environment sustained the large numbers of Aboriginal groups from this general region, which was rich in food resources. These people 'were able to exploit, within a comparatively small area, a coastal and estuarine or riverine environment, bordered by sub-tropical rainforest, swamps and lightly timbered country. This environmental diversity resulted in a very favourable food supply, which was plentiful, varied and dependable' (Sullivan 1977: 104).

Aboriginal subsistence activities in the coastal lowlands consisted primarily of fishing by men and shellfish and fern-root gathering by women. Burleigh Heads was a popular location for the gathering of shellfish from the oyster beds of Tallebudgera Creek and for fishing. There was ample freshwater in the lagoons and wetlands behind the beach dunes along the coast. West Burleigh was known as Caningeraba, which meant 'oyster ground' (Steele 1984: 62). Fishing was done with a scoop net but set nets, weirs, fish traps and spears were also used (Sullivan 1978).

Bungwall (*Blechnum indicum*), a fern that grows in freshwater streams and wetlands, was an important staple food. Large amounts of the rhizome of the fern were collected and processed by lightly roasting and pounding (Petrie 1904; Uniacke 1956). Bevelled pounders used to process the root of the fern were found in the Gold Coast Airport lands (Hall 1990a).

Other plants which were used included: Black Bean (*Castanospermum australe*) - the seeds were leached in water, pounded and baked; Cabbage Palm - Piccabeen (*Archontophoenix spp.*) which were eaten after boiling or roasting and the fruits of the Lilly Pilly (*Syzygium* and *Acmena spp.*) as well as Native Yam (*Discourse transgress*). The fruits of Midginberry (*Austromyrtus dulcia*) and Native Figs (*Ficus spp.*) were also eaten (Sullivan 1978).

Cultural materials from the region include a variety of wooden implements - canoes, spears, shields, bowls, digging sticks, boomerangs - as well as items made from plant fibre, for example string bags and nets (McBryde 1978: 140-185). The source material for many of these items was locally obtained. Cordage was manufactured from Kurrajong (*Brachychiton pouleus*) and Mat Rush (*Lomandra longifolia*). Stone implements were present, most notably in the form of edge-ground axes (McBryde 1978).

Despite the variety of artefacts produced and used by the Aboriginal inhabitants of the region, the perishable nature of much of the source material makes it unlikely that these items would remain in archaeological deposits. Only the more durable items such as stone tools are likely to survive.

Periodic congregations of large numbers of people are characteristic of Aboriginal life throughout the continent. Often these gatherings involved groups of people travelling long distances. For example, people from the Gold Coast-Tweed-Richmond regions

were known to gather in the Bunya Mountains, at least 200 km north of their homelands. Sullivan (1977: 35) notes that gatherings could include as many as 2,000 people. A variety of purposes were served by these gatherings, for example initiations, resolution of disputes, ceremonies, although the exchange of goods was a central activity. Petrie (1904: 56) describes such an exchange: 'the inland blacks would give weapons, opossum rugs, dogs etc., to the coast blacks for dillies made of rushes which grew only on the coast, shells for ornaments and reed necklaces'.

The construction and use of bora grounds were often an integral part of these congregations. Several bora rings have been recorded on the Gold Coast, for example Burleigh Heads, Bundall, Nerang and Currumbin. Corroborees were still being held at Bundall, Mudgeeraba and Burleigh Heads in the 1870s (Gold Coast and Hinterland Historical Society Journal 1977: 23 Number 11).

### **3.1.1 Aboriginal Use of the Rainforest**

The rainforest contained a variety of food resources. Ainsworth (1922) refers to vegetable food sources and comments that the yam, possibly *Dioscoria transversa* was a delicacy. The wetlands and the well watered soils that the yam requires for its growth, are common in this area but over exploitation by the large Aboriginal population of the area probably kept it from becoming a staple. Pandanus Palm was used as well as Cunjevoi (*Alocasia macrorrhizos*), Native Chestnut and fern roots.

The margins of the different vegetation complexes were rich in animal and plant resources. The rainforest palm species (*Livistonia australis*, *Archonotophoenix cunninghamiiana*) were available all year round and are found on the forest margins. Toxic vegetable foods such as Cunjevoi roots, Burrawang (*Macrozamia densonii*) and Black Bean (*Castanospermum australe*) seeds, which require extended periods of treatment and preparation, are also found on the forest margins. The rainforest provided timbers used in the manufacture of clubs, shields, spears, bark fibres for netting and grasses and reeds for basketry. Animal foods included the Carpet and Diamond Pythons (*Morelia spilota variegata* and *M. spilota spilotes*), the Red-necked Pademelon (*Thylogale thetis*) and the Brush Turkey (*Alectura lathami*). Ethnographic evidence suggests that only Pademelons, which favour the rainforest margins, were caught in large numbers (Byrne 1987: 44).

The Sclerophyll forests are known to provide the most productive habitat for large to medium sized mammals (Mitchell 1978: 152). It is likely that macropods would have been attracted by the open grasslands found along the floodplains and it is possible that Aboriginal burning practices increased the grasslands and hence the numbers of mammals found there. The main watercourses and freshwater wetlands provided water, eggs, fish, eels, turtles, molluscs, ferns and rush roots and water lily tubers.

## **3.2 Archaeological Record**

The information in this section derives from published sources and unpublished consultancy reports, which are acknowledged. In particular, the reports of Collins (1999) and Hall (1990a) have been used extensively and authorship is acknowledged here and throughout the text. These reports deal particularly with the Gold Coast Airport development and are most relevant to the current project.

### 3.2.1 Aboriginal Occupation of the Region

Archaeological excavations in the south-east and north-east corner of Queensland and NSW (respectively) have revealed a long and interesting prehistory. The last two decades have witnessed a dramatic increase in archaeological research conducted in south-east Queensland. Results of the research have established that Aboriginal occupation of this region extends to at least 22,000 years before present (BP) and a relatively good archaeological record has been demonstrated for 6,000 years BP.

One of the earliest excavations in this region occurred in the 1960s when Dr Laila Haglund undertook the salvage excavation of the Aboriginal burial ground at Broadbeach (Haglund 1976). It was estimated that about 150 individuals were buried at this site. None of the remains dated prior to about 1,200 years ago. The development of cemeteries can often signal the consolidation of group membership, and the evidence at Broadbeach suggests that groups in the Gold Coast region became established as distinct entities at least 1,500 years ago.

Bushrangers Cave is an Aboriginal site located at the base of a high cliff in the McPherson Range. Excavation revealed that occupation of this campsite might have begun around 10,000 years ago (Hall 1986). Animal bones, recovered in the excavations, represent the remains of food consumed by the Aboriginal inhabitants at this site. These remains do not change during the long occupation of the cave. This strongly suggests that not only did the Aboriginal inhabitants consume a varied diet of wallaby, possum, turkey egg, fish and other animals but also that the local environment had remained quite similar during this time.

The Kombumerri and archaeologists from The University of Queensland conducted an archaeological excavation at Hope Island. This work was on a mound of shellfish, which was dated to at least 4,500 years ago (Walters *et al.* 1987). The site provides evidence for coastal exploitation in the region at a period when the sea had transgressed and the shoreline was close to its present level. Dates obtained from other coastal excavations in the region, also fall between 2,000 to 4,000 years BP. This apparent lack of antiquity for the coast may reflect the later occupation of these areas or, more likely, reflects coastal erosion or inundation from rising seas of sites older than 2,000 years BP as well as the limited number of excavated and dated sites.

The coastal strip, including the hinterlands of northern NSW is known to have been a major focus of Aboriginal occupation at the time of European settlement. This is substantiated by the number of recorded sites for this region in the NSW National Parks and Wildlife Service, Department of Environment and Conservation Site Register. Archaeological sites have been recorded in the general region around the study area.

### 3.2.2 Archaeological Sites Recorded in the Region

The fullest archaeological information for the north coast comes from the Macleay and the Richmond River estuaries (McBryde 1974, 1978, 1982). Other studies have been conducted by Sullivan (1982), Barz (1982) and Byrne (1987).

The majority of archaeological sites recorded in the region are found on the coastal strip. This may reflect the emphasis of development in the area as more surveys have been conducted on the coastal plain and therefore more sites have been recorded. However, the ethnographic data supports the known archaeological evidence in that large numbers of people did live for long periods on the coast and large numbers of

sites can be expected as a result. For example, hundreds of Aborigines were reported to be living in the Tweed Valley in the early 1870s (Byrne 1945).

The first detailed investigation of an Aboriginal site on the Tweed Estuary was undertaken at Terranora about 7.5 km south of Gold Coast Airport (Barz 1982). The Terranora 19 midden (Number 4-2-6) covered a 65 m by 11 m area and had a depth of 40 cm. It was located on a low spur, which extended into the alluvial plain above the river channel. The burials found at the location were removed and re-interred at the Tweed River Aborigines memorial (Piper 1994: 5).

The lowest unit had a date of approximately 600 years BP. Snapper and other fish bones, oyster shell and bone points occurred in the lower unit. Over time shell density decreased and whelks were the dominant shellfish. Fish bones were smaller and terrestrial animal bones were present. The upper surface unit was of recent origin and contained post European debris (Collins 1999: 20).

A midden (Number 4-2-71) dated to between 4,700 and 4,200 years BP has been investigated at Sextons Hill, which is 5.5 km south of Gold Coast Airport (Appleton 1993). As with the Terranora midden it was situated on a low spur near the Tweed River. Although already partially destroyed the remains included oyster, whelk and cockleshell with the bones of pademelon, snapper and bream, and artefacts such as bone points, ochre, and stone artefacts (Appleton 1993: 49).

Surface survey has been undertaken throughout the Tweed Estuary. Piper (1991) investigated the Tweed River downstream of Barneys Point Bridge Terranora Creek, Terranora Broadwater, Cobaki Creek and the southern half of Cobaki Broadwater. Fourteen middens were recorded including a midden on the western bank of Cobaki Creek.

Eight of the middens found were extensive, well preserved and contained stratified cultural deposits. One was found on Ukerebagh Island, three along Terranora Creek and four along Terranora Broadwater (Piper 1991: 16-17).

A survey of seven modern quarry locations was undertaken in the Tweed Heads/Murwillumbah areas as part of an environmental impact statement for the Tweed Shire Council (Piper 1994). The quarries were located at Brunswick Heads, Murwillumbah, and near Tweed Heads. They were located in the hinterland hills where the topography is characterised by steep hills dissected by steep sided gullies. No archaeological sites were located at any of these quarry locations.

A number of archaeological surveys have been undertaken in the NSW and Queensland hinterlands. Some of this previous work is summarised here in order to show the known range and nature of the archaeological material in the region.

Lilley (1987) surveyed land extending north from Cobaki Creek to the Queensland-NSW border. The north-east corner of the parcel he surveyed is just west of the road reserve corridor adjacent to John Flynn Hospital and Medical Centre. A second inspection was undertaken by Hall (1990b) but neither survey located sites. Both authors attributed the lack of sites to the considerable European disturbance, which has occurred in the area.

Telecom Optic Fibre Cable route between Brisbane and Banora Point was surveyed in 1991 (Davies 1991). The route was generally located adjacent to the Pacific Motorway. No archaeological sites were located. In 1993 Kuskie undertook an archaeological assessment of the proposed route of Optus Communications' fibre optic cable between



Rochedale and Coolangatta. A total of four artefact scatters and one isolated artefact was located during the survey. All sites were located in close proximity to watercourses (Kuskie 1993).

Surveys along Tallebudgera Creek have indicated the presence of shell middens, scarred trees and artefact scatters. Barker and Davies (1994) investigated a midden site at the location of a footbridge constructed across Tallebudgera Creek, east of the Pacific Motorway, approximately 2 km inland from the mouth of the Tallebudgera Creek.

The survey investigated in situ material eroding from the foreshore and a mound of material (on which the former railway station had been located), which was interspersed with shell, stone artefacts, bottle glass and broken crockery (Barker and Davies 1994: 18). Black (1995) identified at least 19 sites including scarred trees and middens consisting of Oyster, Cartrut, *Plebidonax* and Whelk during the Tallebudgera Greenspace survey.

### **3.2.3 Archaeological Sites Recorded Around the Study Area**

More than 100 Aboriginal sites have been registered with the NSW National Parks and Wildlife Service, Department of Environment and Conservation, from the north east of NSW within 30 km of Gold Coast Airport. Eighty of these occur in coastal zone and include shell middens, open campsites, isolated artefacts, burials, bora/ceremonial sites, stone quarries and a stone arrangement.

A midden (Number 4-2-39) was recorded in 1985 (Lilley 1987) on the Cobaki Broadwater foreshore within the boundaries of the Gold Coast Airport. The parcel of land encompassing the site was nominated in 1987 and listed in 1991 on the Register of the National Estate. In addition to its Aboriginal cultural significance the site was deemed to represent one of the few remaining camping-midden sites in the Gold Coast-Tweed region and the only one known for Cobaki Broadwater (Lilley 1987). The National Estate area is approximately 9.5 ha and provides a buffer zone between the midden and the cleared airport precinct. Another midden (Number 4-1-31) has been reported and recorded immediately west of the airport boundary (Collins 1999: 18).

Hall (1990a) undertook a study of the Gold Coast Airport as part of the draft master plan preparation. He conducted surveys in undeveloped areas to the south and west of the main runway. Hall relocated midden Number 4-2-39 and found stone artefacts and shell fish remains in elevated areas in the north-west of the National Estate area. Hall found that the finds were not as rich as in the National Estate area and that some parts had been subject to sand extraction. Where shellfish were found in disturbed areas, Hall reported a lower level of archaeological integrity than those in the National Estate area. Hall's results suggested that away from the National Estate area the construction of the airport and mining and clearing activities had destroyed most of the archaeological record of the plain. (Hall 1990a: 15).

Collins (1999) undertook an assessment of the route options for the proposed Tugun Bypass. A field reconnaissance found three low-density stone scatters and a single isolated artefact. All were in disturbed contexts and according to Collins were rated as having a low level of scientific/archaeological significance.

Collins notes that despite the low scientific value of the sites found in the airport area representatives of the Kombumerri group consider all sites in the area to have high

social/cultural significance and that the cultural landscape of which they were part is worthy of preservation (Collins 1999: 41).

An additional site consisting of a stone artefact scatter was identified to the south-east of the southern end of the main airport runway during 2001 (Gold Coast Airport Limited 2004). The artefacts at this site were found over an estimated area of 300m<sup>2</sup> and consisted almost entirely of small flakes less than 3cm.

No sites of non-Aboriginal cultural significance were discovered within the scope of this study, within the grounds of the Gold Coast Airport.

### 3.2.4 Summary of Sites Found in the Region

A summary of sites previously recorded from the study area is provided in Table 3.1 and shown on Figure 3.1.

**Table 3.1: Summary of Previously Recorded Sites from the Study Area**

Site	Description
Destroyed bora ground	<ul style="list-style-type: none"> <li>▪ located along Boyd Street to the east of the proposed transport corridor;</li> <li>▪ site destroyed during previous construction works in the area.</li> </ul>
National Estate Midden Number 4-2-39	<ul style="list-style-type: none"> <li>▪ complex of stratified middens with stone artefacts and well preserved deposit to a depth of up to 75 cm;</li> <li>▪ culturally and archaeologically significant;</li> <li>▪ enclosed in a parcel of 9.5 ha affording a buffer of some 200 m;</li> <li>▪ the proposed corridor extends into the defined boundary of the National Estate area by approximately 0.35 ha. This intrusion is entirely within the previously disturbed area of the site and does not impact on the shell midden or the fenced-off vegetated area;</li> <li>▪ Section 30 advice has been received from the Australian Heritage Commission.</li> </ul>
Midden Number 4-1-31	<ul style="list-style-type: none"> <li>▪ located to the west of the proposed corridor near Cobaki Broadwater;</li> <li>▪ site is in poor condition.</li> </ul>
Site 1 – Artefact Scatter (Collins 1999 and Hall 1990a)	<ul style="list-style-type: none"> <li>▪ within the footprint of the proposed Tugun Bypass;</li> <li>▪ occurs in a highly disturbed context- area has been artificially lowered;</li> <li>▪ displays no potential for subsurface deposits;</li> <li>▪ importance of site relates to the association with occupation of the in situ middens closer to the Cobaki Broadwater.</li> </ul>
Site 2 – Isolated Find (Collins 1999)	<ul style="list-style-type: none"> <li>▪ occurs in a highly disturbed context;</li> <li>▪ displays no potential for subsurface deposits;</li> <li>▪ importance of site relates to the association with occupation of the in situ middens closer to the Cobaki Broadwater.</li> </ul>
Site 3 – Artefact Scatter (Collins 1999)	<ul style="list-style-type: none"> <li>▪ occurs in a highly disturbed context to the west of the proposed transport corridor;</li> <li>▪ displays no potential for subsurface deposits;</li> <li>▪ importance of site relates to the association with occupation of the in situ middens closer to the Cobaki Broadwater.</li> </ul>
Site 4 – Artefact Scatter (Collins 1999)	<ul style="list-style-type: none"> <li>▪ occurs in a highly disturbed context to the west of the proposed transport corridor;</li> <li>▪ displays no potential for subsurface deposits;</li> <li>▪ importance of site relates to the association with occupation of the in situ middens closer to the Cobaki Broadwater.</li> </ul>

Site	Description
Artefact Scatter (Bonhomme, Craib & Associates 2001)	<ul style="list-style-type: none"><li data-bbox="687 282 1374 360">▪ occurs to the south-east of the southern end of the main airport runway and to the east of the proposed transport corridor;</li><li data-bbox="687 371 1374 398">▪ exposed in the eroding western face of a sand rise;</li><li data-bbox="687 409 1374 427">▪ consists almost entirely of small flakes less than 3cm.</li></ul>

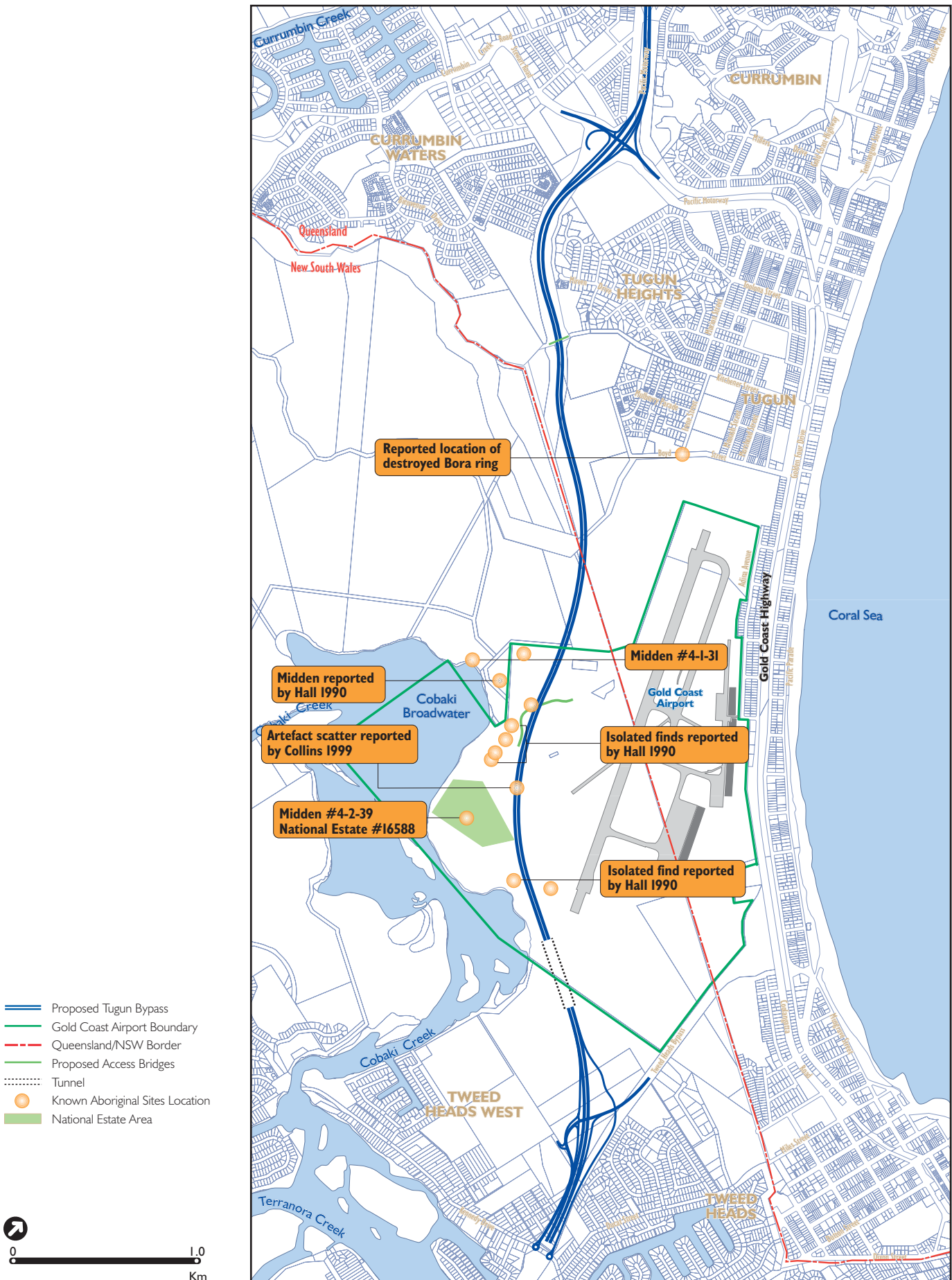


Figure 3.1 Locations of Known Aboriginal Sites

**Middens:** open accumulations of shell, food refuse heaps, sometimes accompanied by stone tools. For example, middens found on Tallebudgera Creek in the Burleigh Heads National Park consisted of *Eugerie* shells (*Plebidonax sp.*), *Anadara sp.*, Mud Whelk and Oyster (*Crassostrea sp.*). Locations of middens vary from open beach, rocky headland and estuarine (creeks and rivers). Burials are sometimes located in middens.

**Scarred trees:** trees, which have evidence of purposeful removal of bark. The bark was used for a variety of implements including canoes, shields and bowls. Scars may also result from the taking of possums or honey from trees and may be in the form of toeholds in the trunk or larger branches. There are a number of criteria, which are used to distinguish natural (e.g. lightning strike, fire, branch throw) from humanly produced scars. These include the age of the tree, the shape of the scar, whether it terminates above ground level, the condition of the heartwood (that is evidence of irregularities) and the presence of axe marks.

**Bora ground/ceremonial ground:** used for initiation ceremonies and other social gatherings. They usually occur as earthen circles, generally located in the vicinity of a reliable water source, on flat terrain on the top of a ridge or spur at or below an altitude of 150 m. One saucer shaped earth mound was found behind a dune at Burleigh Heads and a ceremonial ground (now destroyed), straddled the Gilston – Nerang Road. The bora reported at Tugun, north of the airport has gone. Pathways between the rings, which made up a ceremonial ground were common and were as important as the rings. In 1871 at a time when the local Aborigines were being employed to help clear the land a final tribal fight took place on the flat at the back of Burleigh. Aborigines had come from Maryborough and Bellingen River to participate. As many as 600 people participated in the corroborees which preceded the fight (Longhurst 1991: 15).

**Pathways:** although the forest and scrub of the coast and the hinterland was largely impenetrable to European settlers, the Aborigines had well defined centuries-old paths and tracks, which connected tribal areas. Some of these followed dreaming paths. There were well-defined paths across Beechmont Plateau to the coast area and paths connected the coastal people to the Bunya festival area (Longhurst 1992).

**Artefact scatters:** open surface scatters of stone artefacts. Lithics are often the only material that survives and represent camps and/or specialised activity areas. At these sites, stone tools were manufactured and/or used to maintain other implements and utensils. Stone artefacts have been collected from Aboriginal sites along the coast from Nobby Beach to Currumbin and the Gold Coast Hinterland.

**Burials/burial grounds:** areas where human remains are interred. These sites may contain a single individual or may be extensive burial grounds (e.g. the Broadbeach burial ground) with evidence of complicated mortuary practices and which were used for long periods of time. Burial in the earth was usually practised though middens and caves were also used.

**Fish traps/fishing locations:** these are locations where either the natural rock formation is used to trap fish or barriers are constructed at suitable locations in the creek. One such site is reported to have existed on the Nerang River, close to the location of the Gilston-Nerang ceremonial rings.

**Rockshelters:** usually occur in areas of rocky terrain. Shelters have been recorded and excavated in the hinterland and on the plateau (see Bushranger Cave) and they can be the location of a number of activities, including occupation, art, burials and ceremonial activities. Lahey an early settler in the Binna Burra area on the plateau found the remnants of Aboriginal cooking fires, animal bones and crayfish shells in Kweebani Cave (Longhurst 1992: 22).

**Mythological and Traditional sites:** places of traditional significance to Aboriginal people. Often these areas exhibit no alteration to the natural landscape. As such they are archaeologically invisible and can only be identified by Aboriginal informants. Such sites hold particularly cultural significance to Aboriginal people. There is still knowledge of significant sites among Aboriginal people. A site of significance has been reported on the Burleigh Headland.

### 3.3 Early Non-Indigenous History

The earliest written description of the region comes from Sir Joseph Banks, the botanist on Cook's voyage. As the ship moved northwards along the coast, Banks described the area north of Fingal as 'very low land which looked like an extensive plain in which we supposed there to be a lagoon, in the neighbourhood of which were many fires' (Beaglehole 1968: 63).

Sustained European presence began with the establishment of a penal settlement at Redcliffe, Moreton Bay in 1824. In 1826 the commandant of the penal settlement, Captain Patrick Logan, travelled south and named one river the Darling. This name was changed in 1827 to the Logan. By 1828 the number of runaways who tried to escape south increased and a military post was established on the Tweed River. According to the evidence given by Alan Cunningham in February 1832 to the Select Committee on Secondary Punishment the post was abandoned some time before he left Moreton Bay in September 1829 as a result of trouble with the local Aboriginal people (Longhurst 1991).

In 1828 Captain Henry Rous explored the rivers between Port Macquarie and Moreton Bay in the *Rainbow*. He 'discovered a River falling into the Sea south of Point Danger' (Longhurst 1996: 8) and he named it the Clarence River. Oxley had discovered the Tweed River in 1823 but Henry Rous seemed unaware of that discovery (Longhurst 1996: 8). Rous also found the Tallebudgera and subsequent charts and maps [produced by the *Rainbow's* master Captain Johns] detailed the course of the Tweed beyond the present site of Murwillumbah, and also that of Terranora Creek, and Terranora and Cobaki Broadwaters, with the future site of Coolangatta described as 'Tea Tree' and the land to the north of Cobaki Broadwater described as Tea Tree Swamps bounded by hills (Longhurst 1996: 10).

For a while a guard was mounted at Point Danger to intercept runaways from Moreton Bay. 'Convict records in Brisbane's John Oxley Library confirm that by December 1828 a post at Point Danger was in occupation and convict labourers had been assigned there' (Longhurst 1996: 11). Increasing hostility between the guards and the local Aborigines forced the abandonment of the post in 1829 (Longhurst 1996: 12).

Cedar was being cut on the Tweed as early as 1829 and by 1843 became the colony's primary source of that timber. Cedar camps were widespread on the complex stream systems of the area. On the Tweed River, Terranora was the centre for cedar cutters with stores, inns and shipping facilities. Cedar cutting on the Tweed boomed in the 1860s when the southern rivers began to be cut out (Longhurst 1996). The local Nganduwal people had been menaced by the cedar cutters and apparently had attacked in retaliation (Longhurst 1994: 13). The pastoral occupation of the upper Albert and Logan Rivers, which had started in 1842 gradually affected the land along the coast north of the Tweed River. The region was opened for free settlement in 1842 and about this time Beau Desert Station was established. This station was located in the

area between the Logan River and the sea, and south to the present Queensland-NSW border (White 1990).

In 1848, Alfred William Compigne acquired the leasehold of Nindooibah Run, in the Albert River area. This run was located adjacent to Beau Desert Station. In 1852, Compigne was issued with the leases for Run Number 5 and Run Number 6 known as Dungogie and Murry Jerry respectively (Longhurst 1994).

Dungogie includes the Currumbin Valley. Murry Jerry was centred on Bonogin and Mudgeeraba Creeks (Burrows 1989: 7). In August 1852, both Runs were transferred to William Duckett White of Beau Desert Station. These runs, however, were not part of Beau Desert Station, but were separate and used as breeding and heifer stations (Jones 1988).

The Robertson Land Act of 1861 (NSW) allowed grants of up to 1,280 acres and the passing of the Crown Lands Alienation Act of 1868 provided for extensive resumption of leased runs and opened up a large part of south-east Queensland for selection (Longhurst 1996). In 1861, much of Beau Desert Station had been taken up as Agricultural Reserve and by 1867 large portions of W. D. White's coastal runs of Dungogie and Murry Jerry had been surrendered (Longhurst 1996).

Between 1870 and 1885 much of the selection of the Currumbin Valley occurred (Horsman 1995). The first was Samuel William Gray who in 1870 selected land on the north and south banks of Currumbin Creek effectively taking up all the best areas. Henry Jordan was the first permanent settler in Currumbin, a sugar planter who sold his Tygun estate at Pimpama in 1874 and took up 3,120 acres of the north side of Currumbin Creek for cattle grazing. Henry Eden took up land at the head of Currumbin Creek in 1882. He was a timber merchant and he bought the land for access to the trees. Simpson and Rowland took up smaller portions adjacent to Gray's land (Horsman 1995).

Currumbin township was surveyed and proclaimed in May 1887 but no development occurred until the railway went in. In 1902 the Dolan's bought 203 acres of land extending from Currumbin Creek back to the Queensland-NSW border and began clearing for dairying (Horsman 1995).

The terrain throughout the Albert Region was difficult and supplies went by boat. In 1870 the settlers south of Nerang had their supplies landed there and carried them by dray over tracks described as permanent bogs (Longhurst 1996). A road gang was sent in March 1870 to clear a track from Pimpama to Nerang Creek and in 1871 another was cut through the scrub to the settlement at Tallebudgera. After 1871 Cobb and Co. ran coaches twice a week to Nerang Creek, which was then a small township near Benowa (Longhurst 1994).

Tallebudgera became a transit post for travellers over the bridle track from Tweed and Nerang. This rough track survives today as part of the Pacific Motorway and the Old Coach Road (Longhurst 1994). Tallebudgera continued to grow after 1884 as a government road party opened the coach road over the ranges to Murwillumbah through the Currumbin Valley. The Old Coach Road was travelled by the mail coach service from Nerang through Tallebudgera and the Currumbin Valley over the border at Mount Tomewin to Murwillumbah for 17 years from 1886 to 1903 (Longhurst 1994).

In the early 20th Century bananas became important and much of the hill country of the Currumbin Valley was cleared. Dairying was becoming more prominent while the remaining sugar growers became more efficient (Horsman 1995). In 1901 work commenced on the railway between Nerang and Tweed Heads. The rail crossed Tallebudgera Creek at the Oyster Beds [West Burleigh], but it by-passed the town of Tallebudgera. By 1903, Tallebudgera was no longer a coach stop on the road to Murwillumbah (Longhurst 1991).

In the 1930s, bridges were constructed over the major rivers and the road between Brisbane and Southport declared a 'main road' (Jones 1988). From this time the region prospered.

Cane and dairy farming thrived on the Tweed River. Dairies sprang up at Murwillumbah, Byron Bay, Tyalgum and Brunswick Heads eventually settling on Murwillumbah and Byron Bay. Bananas followed with commercial production from 1910. The industry was given a boost by the return of World War I soldiers who began to bring the steep slopes of the area under cultivation (Jones 1988: 213-238).

The Aborigines were quickly driven off their lands and drawn into pastoral life once settlement of the district commenced. By 1859, the area from Moreton Bay to Dungog on Tallebudgera Creek was controlled by Native Police under Lt Frederick Wheeler, from his headquarters at Sandgate (Longhurst 1994).

*The Aborigines Protection and Restriction of the Sale of Opium Act 1897* gave protectors of Aborigines extensive powers to control the lives of Aboriginal people and to force their segregation on reserves. As a result many Aboriginal people were removed and re-located (L'Oste Browne and Godwin 1995).

While their traditional lands were occupied, Aboriginal people still had a strong presence. They helped clear the land, they worked in the cane, sugar and cotton fields, they were schooled, they participated in the war effort and increasingly took part in everyday life. In spite of this they remained historically invisible until people of Aboriginal descent began to write the local history from the Aboriginal perspective (Ysola Best pers. comm. 2001).

### **3.3.1 Tugun the Early Years**

In 1898 the Farrell family walked overland from Tallebudgera Township along a track now called Simpson Road to their block of land or selection just south of Currumbin Hill. They established a camp near the present day automatic telephone exchange and started to clear land for a home and later for grazing paddocks for their small dairy herd. For many years their selection and small slab home was the only farming property in the area south of Currumbin to Coolangatta (Gold Coast Daily News 1990). The local Aboriginal people often bartered fish and crabs supplementing the settlers diet when times were difficult (Fischer nd).

The coming of the railway north from Nerang and the completion of the line to Tweed Heads in 1903 brought settlers and then holiday makers to the area. The dairy farmers of the Currumbin area could now send their cream to the butter factories located at the far end of the line at Tweed Heads. Around 1913 the Farrell family applied for a rail stop, which would allow them to load their produce on the train. The siding was known for some time 'as the 65 mile 46 chain stop' and later as Tugun (Fischer nd).

The Lands Department decided on the name Tugun in 1910 and land was subdivided near the beach to allow auctions to take place. The first home in Tugun village was



built in 1916. The construction of a coast road linking Southport to Coolangatta in the 1920s was a major impetus for the developing beach properties in areas such as Bilinga and Tugun (Fischer nd).

F.S. Charles constructed the Seaside Hotel at Tugun in 1925. Over the years the Tugun hotel changed hands. The dairy and banana farms, which dated from the early years, disappeared as the land was subdivided into areas such as the Currumbin Estates in the late 1950s (Fisher nd).

### **3.3.2 Construction of the Gold Coast Airport**

In the early 1930s as airline activity increased it was suggested that landing fields were required between Sydney and Brisbane. At the time the Mayor of Coolangatta pushed for the aerodrome to be sited on 'a tract of useless swampland across the railway line at Bilinga' (Gold Coast Daily News 17 September 1995: 11).

Construction commenced towards the end of the depression and most of the workers were on relief. One such man was Tom Norris who had come with his family from Hervey Bay looking for work. Tom was an expert axe man and was put in charge of a gang felling timber in the swamp. He 'had to wade through water sometimes up to his armpits to fell the trees, allowing a clear path onto the strips' (Gold Coast Daily News 17 September 1995: 11). The old Tweed Heads and Coolangatta rifle range was situated on the southern end of the airport site and many of the felled trees were full of lead.

Gravel from the Miles Street quarry was used to lay three gravel and later grassed strips. The construction work was completed by 1938 and was designated by the Department of Civil Aviation as Bilinga Aerodrome (Lower Tweed River Historical Society 1990: 6-8).

Although only occasionally used the strip was permanently maintained by Tom Norris. The aerodrome was not used permanently during World War II. After the war Queensland Airlines started an air service and it was evident that the airstrip needed to be upgraded. A crew from the Commonwealth Department of Works arrived in 1950 and commenced work to upgrade the airport.

The works supervisor was an experienced earthworks man and he considered the Bilinga job one of his hardest. The southern end was wetland and the northern end was the council sanitary dump (probably the present day Tugun Landfill), which was still being used when construction commenced (Gold Coast Daily News 17 September 1995: 11). Due to the conditions, earthmoving equipment was continually bogged for periods of up to a week or more (Figure 3.2).

The hill at the northern end of the runway was stripped down to gravel to provide the fill for the main runway. By 1952 the works were completed and Butler Airline was running a regular service to Sydney. The railway ran until 1961 and until the late 1950s the area surrounding the airport was devoid of buildings (Gold Coast Daily News 17 September 1995: 11).

The runway was extended in 1968 to accommodate the DC9 and the L-88 Electra aircraft. It was further developed in 1982 for wide-bodied aircraft. The Commonwealth government owned and operated the airport until it vested ownership and operation with the Federal Airports Corporation on 1 January 1988 (Gold Coast Daily News 17 September 1995: 11).



**Figure 3.2: Bogged Earthmoving Machinery During Construction of Present Gold Coast Airport in 1951**

Source: Gold Coast Daily News 17 August 1995: 11.

‘Gold Coast Airport is operated by Gold Coast Airport Limited (GCAL) and caters for international and domestic passengers and freight as well as meeting the general aviation needs of the Gold Coast/Tweed region. The airport is the major tourism and business gateway to the Gold Coast and the northern rivers region of NSW. A former Federal Airports Corporation (FAC) airport, the facility is one of a number of airports to be ‘privatised’ by the Commonwealth government. A 50 year lease with a further 49 year option, was awarded to Queensland Airports Limited (now Gold Coast Airport Limited) in May 1998’ (Main Roads 1999: 7).

### **3.4 Non-Aboriginal Sites**

No historic structures or materials have been identified along the proposed transport corridor.

The non-Aboriginal history of the study area is predominantly related to 20th Century development. Historic material that still exists relates to the development of the coastal strip and the installation of infrastructure such as roads, bridges and railway. The Coach Road from Nerang to Murwillumbah was travelled by the mail coach service from Nerang through Tallebudgera over the border at Mt. Tomewin to Murwillumbah between 1886 and 1903. Most of these old coach roads have been absorbed into the present roads (Longhurst 1996).

The south coast railway was in use from 1903 to 1961 and was instrumental in opening up the area for the movement of produce and then facilitating the growth of the resort industry, which now underpins the Gold Coast economy (Longhurst 1996). Development along the existing highway was pushed by the post war development of the area as a tourist destination. The small timber and fibro houses dating to the 1950s exemplify the development along the highway (Collins 1999).

## 4. Survey

### 4.1 Survey Area

The cultural heritage field survey was based on the original C4 alignment (Main Roads 1999). The centreline of the corridor had been marked with pegs set at 100 m intervals. Each peg contained a chainage distance and Australian Map Grid (AMG) coordinates. Survey work was restricted to within 200 m either side of this centreline. The survey corridor was divided into four sections for descriptive purposes with an additional later section surveyed to try to locate possible burial locations. Each section is characterised by different topography, and/or vegetation as well as levels of impact. Beginning from the northern end, these sections are as follows:

- Stewart Road to Kitchener Street;
- Kitchener Street to Queensland-NSW border;
- NSW Crown land and Gold Coast Airport; and
- Southern Area (airport boundary to Tweed Heads Bypass).

These areas are shown on Figure 4.1.

A recommendation was made that if during preliminary design, refinements to the proposed alignment resulted in the corridor centreline being moved more than 200 m from the original centreline, additional field survey work would be required. Refinements to the original C4 corridor were assessed to determine impacts to the results of the cultural heritage assessment. A comparison of the original C4 and current modified alignments is provided in Figure 4.2. The likelihood of artefacts occurring along the current modified alignment is considered to be low because any refinements made to the original C4 corridor are through previously disturbed areas. Those areas where the refinements are immediately adjacent to the original C4 corridor, have been inspected on foot and no artefacts were located. The area to the south, where a substantial deviation of the modified alignment from the original C4 alignment has occurred, was re-examined for surface artefacts and scarred trees on 6 June 2001.

### 4.2 Methods

An intensive surface survey of the study area was undertaken. This involved a close and careful inspection of the ground surface within the survey area on foot (Figure 4.1).

- The Queensland portion of the survey (Stewart Road to the Queensland-NSW border) was performed on 2 October 2000. Hague Best, (Kombumerri Corporation for Culture representative), Elizabeth Russell (volunteer archaeological student – University of New England) and Dr John Craib participated in this work.
- Survey along the NSW portion was conducted on 3 October 2000 with George Scott and Mick Leon, representing the Tweed-Byron Local Aboriginal Land Council, Elizabeth Russell and Dr John Craib.

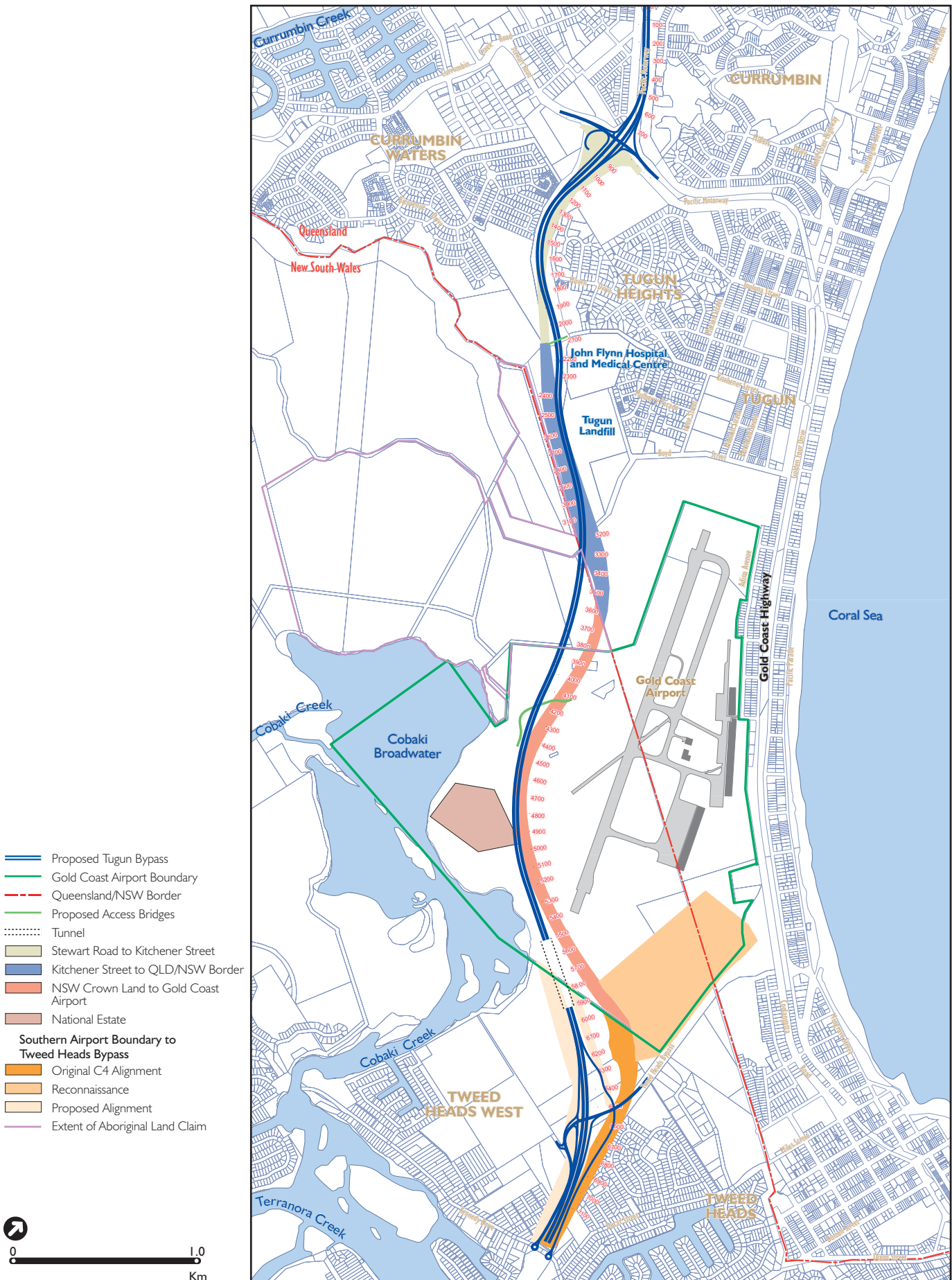


Figure 4.1 Cultural Heritage Survey Zones

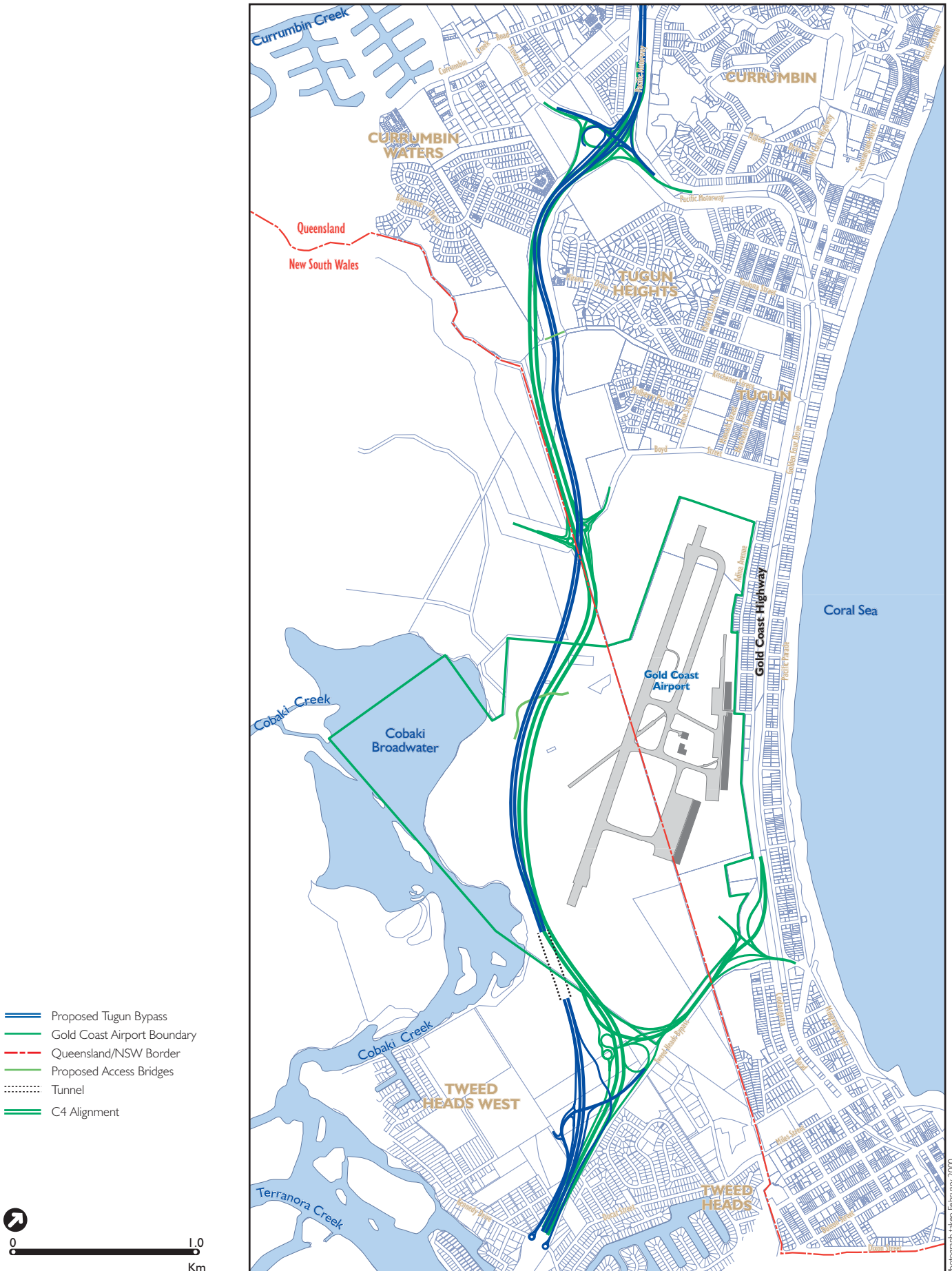


Figure 4.2 Deviation of Proposed Corridor from the Original C4 Alignment

Photograph taken February 2000

This type of survey is designed to identify precisely and completely all visible surface archaeological (Aboriginal and non-Aboriginal) materials and/or features. This type of survey is not conducive to determining if subsurface material may exist. A careful inspection of eroding and disturbed banks was made to determine if any subsurface material was visible.

#### **4.2.1 Survey Constraints**

The visibility of the ground surface was highly variable within the study area. Visibility on the flood plain was generally poor due to the thick cover of grasses. Animal trails, artificial and natural exposures, which allowed direct observation of the ground surface, were examined in detail. The southern area contained dense Paperbark woodland with fern undergrowth that effectively prevented any visibility except along eroded tracks.

#### **4.2.2 Consequences of Previous Land Use**

European activities since settlement have created visible and dramatic impacts. Figure 2.1 shows the area in 1946 when construction of the airport was beginning. The area along Boyd Street was already being quarried. Figure 3.2 shows the degree of impact caused by bulldozing for the airport. Subsequent activities associated with runway construction have seen the infilling and excavation of areas of the plain through out the airport lands. Drainage lines have been excavated in and around the airport.

The north-west area has a large landfill in operation today. Housing on the Tugun Heights has substantially altered the northern area. A sand dredging operation was established on the wedge of airport land south of the National Estate area. A number of artificial drainage lines have been excavated through the airport and several sections which probably once constituted low rises surrounded by swamp have served as sand borrow area (Hall 1990a: 2).

### **4.3 Survey Results**

#### **4.3.1 Section 1: Stewart Road to Kitchener Street**

This section begins at the intersection of Pacific Motorway and Stewart Road and continues to Kitchener Street, a distance of roughly 1,400 m. This section includes pegs chainage 800 to chainage 2,200.

The northernmost portion of this section is located within a disturbed area. It appears that much of the area has been bulldozed as indicated by long, high mounds of earth along the western side of the corridor, adjacent to the residential area. The area is covered in low thick grass. Visibility is poor throughout, except for the dirt tracks that cross the area.

Between pegs chainage 1,200 and chainage 1,300, the corridor extends up a moderate slope covered in open woodland. This slope broadens into a terrace with steep, nearly vertical slopes. Tracks are also present in this area, again providing the only visibility.

Narrow erosion gullies are also present around the tracks. Abandoned cars were found across the bench amongst the tree cover. Undergrowth becomes more common towards the south.

A portion of a large cleared area is present in the corridor. As indicated in the 1946 aerial photo this area was formerly a narrow ridge. Visibility in this area is 100 percent but so is the disturbance. The ridge has been reduced in the area of the corridor by several metres and even more in the area to the west.

The southern end of the graded knoll is located along the top of a very steep slope dipping southwards into a thickly vegetated gully containing lantana. A similarly steep, thickly vegetated slope is present on the southern side of the gully. The aerial photo (Figure 2.1) indicates that most of this gully was cleared of vegetation in 1946. The current cover is recent regrowth. The southern slope rises up to a narrow (less than 8 m wide) ridge containing a bitumen road.

No cultural materials were found in this section of the corridor nor are any known from the immediate area beyond the corridor.

#### **4.3.2 Section 2: Kitchener Street to Queensland-NSW Border**

This section is approximately 1,300 m long and extends across a ridge slope, lowlands adjacent to an extensive wetland and ending at the Tugun Landfill. This section includes centreline pegs chainage 2,300 through chainage 3,600. Previous impacts along most of this section were minimal with the notable exception of the landfill area covering about 600 m of the corridor, ending at the Queensland-NSW border. The corridor centreline runs along the western edge of a wide, flat low area that appears to be former wetlands. East-west channels have been cut across this area. The 1946 aerial photo (Figure 2.1) more clearly indicates this area as a wetland. Centreline peg chainage 2,700 is located in thick scrub on slightly higher ground approximately 20 m west of the grassy wetlands. Surface visibility along most of this section of the corridor was virtually nil, due to the thick grass and leaf litter. The only visible portions were within the landfill area (chainage 3,200 to 3,600) where the current ground surface consists almost entirely of graded fill.

No cultural materials were found in this section of the corridor nor are any known from the immediate area beyond the corridor.

#### **4.3.3 Section 3: NSW Crown Land and Gold Coast Airport**

This section of the corridor crosses about 300 m of NSW Crown Land and enters Gold Coast Airport extending about 2,200 m. It begins at the Queensland-NSW border (chainage 3,600) and ends at the southern boundary of the airport (chainage 5,800).

Almost three-quarters of the corridor in the airport section crosses an area that has been lowered by about 3 m. The original, albeit cleared, surface is present from about chainage 4,500 and extends roughly 600 m to the north, the remaining 1,600 m to the south are in this lowered area.

Most of this section is a flat, open expanse covered with low vegetation to a height of approximately 30 cm or less. Visibility was variable, estimated to range from zero to 50 percent. Pockets of thick scrub are present along the corridor, primarily in the central and southern portions. Visibility in these scrub areas was virtually nil.

The only cultural materials found during the survey were located about 150 m east of centreline peg chainage 4,700. This area has previously been recorded (Hall 1990a) and was visited during this survey in order to ascertain the distance between the proposed corridor and the site.

The material, which was found during this most recent survey, consisted of four pieces of flaked stone. These materials are eroding from the original surface; the area immediate to the west (and continuing eastwards across the corridor) has been artificially lowered (Danny Eatock pers comm.).

A previously recorded site containing flaked stone artefacts exists in the airport area about 14 m west of peg chainage 4,700. The site was relocated during this survey and its location recorded. A National Estate listed shell midden is located on the airport lands approximately 400 m south of peg chainage 4,700. As shown on Figure 4.3, the footprint of the proposed alignment extends beyond the boundary of the National Estate area by approximately 0.35 ha. The intrusion of the proposed footprint into the National Estate area is entirely within the previously disturbed area of the site, remaining outside the fenced-off vegetated area. Discussions have been held with Traditional Owners and Section 30 Advice under the *Australian Heritage Commission Act 1975* has been received from the Australian Heritage Commission on this issue (refer to Section 4.5.1).

#### **4.3.4 Section 4: Southern Airport Boundary to Tweed Heads Bypass**

##### **Original C4 Corridor**

Section 4, covering approximately 26 ha, lies a minimum of 700 m east of Cobaki Creek. Currently, most of this area is flat floodplain covered in open woodland with thick scrub, with some areas containing a thick heath cover. Exposure and visibility was minimal (estimated to be less than 1 percent throughout this area).

During this project an unconfirmed report of human remains being unearthed in this general area was received (refer to Sections 1.5.5 and 1.6 for discussion). No one with first-hand knowledge of this site has been identified nor has the location of these remains or the date when they were discovered been determined.

No site records for any human remains exist with National Parks and Wildlife Service, NSW Department of Environment and Conservation (Liam Dagg, pers. comm.) for the study area. However, it is not unusual for human burials to be present in coastal dune situations. Although it remains unconfirmed, the possibility that burials are present in this area cannot be discounted.

No cultural materials were found in this section of the corridor although this area may contain such materials including human burials.

##### **Reconnaissance**

An on site meeting was held 27 November 2000 at the Tweed Heads Pony and Hack Club with Jacki McDonald, Claude McDermott and Jason McDonald (representing the Moorung Moobah Traditional Owners) to discuss the project. During this meeting Claude McDermott recalled that as a young boy he visited his grandmother who lived in a humpy in the area. He also said that in particularly hard times his father would hunt and fish to provide food for the family. Jacki McDonald reminisced about local tucker, which formed part of her diet as a child. Specifically she mentioned Lillypillies and Midginberries.

The area around a fibro house at the Tweed Heads Pony and Hack Club was inspected as anecdotal information (Jacki McDonald pers comm.) suggested a burial might be located in this area. Immediately adjacent to the house two scarred trees probably of non-Aboriginal origin were located. The axe marks and shape of the scars suggested Aboriginal persons did not make these.



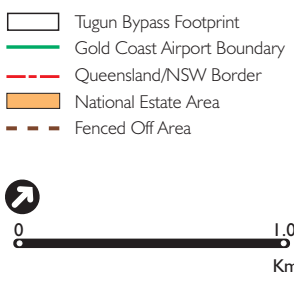


Figure 4.3 Proximity of Proposal Footprint to National Estate Area

Photograph taken February 2000.

## Proposed Alignment

An inspection of the proposed alignment between the southern airport boundary fence and the Tweed Heads Bypass (chainage 5,700 to 6,800) was undertaken on 6 June 2001. Visibility throughout this area was confirmed as generally 0 percent. A scatter of shells was found on a low disturbed dune. The location and content of the scatter are suggestive of a natural shell deposit, which has been redeposited in the dune. It is not considered Aboriginal in origin (refer to Appendix A). Vegetation along the proposed alignment was dense with some large trees present. No obvious traditional scarring on any trees was found. The axe marks and shape of the scars on the two trees located immediately adjacent to the derelict house suggest Aboriginal persons did not make these scars (refer to Appendix A).

## 4.4 Summary of Results

The corridor crosses a variety of landforms although the low coastal flats comprise the majority of the area (Table 4.1). Visibility was variable, estimated to range from 0 to 100 percent although the latter correlated primarily with the amount of disturbance. Generally, the higher the visibility the higher the level of disturbance. Areas along the route having the greatest levels of visibility included the large cleared area to the north of Kitchener Street (100 percent visibility) followed by the flat open areas within the boundary of the Gold Coast Airport where visibility ranged from 0 to 50 percent. Both these areas however, have experienced large-scale disturbance. Disturbance to the cleared area to the north of Hidden Valley has been from quarrying activities while the area within the airport boundary has been significantly modified as a result of construction and maintenance of the airport. It is unlikely that intact material survives in these locations.

**Table 4.1: Summary of Survey Results**

Survey Section	Landform	Approx Area (ha)	Estimated Mean Visibility (%)	Estimated Range of Visibility (%)	Previous Impact	Estimated Previous Impact*	Cultural Material +
1	lowlands	5	<1	0 < 5	Logging, bulldozing tracks	100	None
1	terrace	5	20	0 40	tracks, grading	25	None
1	knoll	4	50	0 100	quarry	75	None
1	slope	3	0	0	clearing	100	None
1	ridge	1	<1	0 30	road, track	80	None
2	slope	5	<1	0 1	clearing	<10	None
2	flats	11	<1	0 5	grading, filling	10	None
3	flats	50	30	0 50	grading, clearing	100	None
4	flats	26	<1	0 1	roads, tracks	<5	None

Notes: \* affecting ground surface;  
 + within the corridor

Levels of potential sensitivity were established on the basis of the survey results. These were based on environmental setting, level of previous impact and proximity to known sites. These levels refer to the level of sensitivity of the area to the occurrence of artefacts and in no way reflect on the significance of the area to Traditional Owners.

**Low sensitivity:** At this level there is very little chance that intact cultural deposits would be present even in those areas where they might be expected to have been in the past (e.g. in the airport grounds, immediately east of the Cobaki Broadwater). Also included in this category are those topographic areas (e.g. steep slopes) that seldom exhibit cultural material or deposits.

The majority of the proposed corridor falls into this level of sensitivity. Large-scale impact was observed through most of the corridor, beginning at Stewart Road, extending over the hill containing the former quarry and into the airport grounds that have been extensively modified over the years.

**Moderate sensitivity:** This level includes areas that Aboriginal people would have used in the past but in such a manner that durable cultural materials (e.g. stone artefacts) are likely to have been rarely deposited. Even though disturbance may be minimal, the probability of cultural materials or deposits in these areas is low.

The area that falls into this category is located in the corridor south of the John Flynn Hospital and Medical Centre. This portion is located on the lower slopes at the western edge of former wetlands. The area appears to have had some impact (e.g. clearing) and its proximity to the wetlands (resource area) makes it possible that cultural materials may still be present though covered by alluvial and colluvial processes.

**High sensitivity:** the only area that falls in this level is located at the southern end of the proposed bypass. This area has experienced the least amount of impact and is characterised by sand deposits between the river and the coast. Stories of a burial (grave) in this region have been reported and at present cannot be discounted.

#### 4.4.1 Further Work Required Prior to Construction

The requirements outlined below have been discussed with the Main Roads Project Manager and Parsons Brinckerhoff (PB) (formerly PPK) and agreed in principal at a meeting held on 18 December 2000.

- Continued consultation with the Traditional Owners was required and has been an ongoing part of the current process. It was suggested that meetings be held with Traditional Owners after they have had time to consider the draft report. A draft copy of this report was distributed to Traditional Owners on 21 March 2001. Comments on this draft were received from Ysola Best (Kombumerri) and Jackie McDonald (Nganduwal) (refer to Section 5.1). Meetings to discuss the current status of the project have been held with:
  - ▶ Ysola Best and Pat O'Connor (Kombumerri) 31 May 2001 and 11 April 2003; and
  - ▶ Graham Dillion (Kulwun Development Corporation) 7 November 2001 and 14 April 2003 (refer to Section 1.5.5).

Appropriate technical staff from PB and Main Roads and the archaeologists attended these meetings.

Meetings with Traditional Owners will be ongoing throughout the project.

- If the project is to proceed the recommendations and requirements for further work and the precise technical activities, which would be undertaken during pre-construction and construction would be discussed in full.
- If the project is to proceed a cultural heritage management plan should be prepared in consultation with the Traditional Owners.

- Prior to ground clearance the following areas would be tested for subsurface deposits (Figure 4.4):
  - ▶ the western edge of the wetlands between centreline pegs chainage 2,500 and chainage 3,200 (assessed as moderately sensitive – area appears to have had less disturbance than southern airport area and its proximity to the wetlands, ridge and bora ground makes it possible that cultural materials may still be present);
  - ▶ the road alignment between chainage 4,600 and chainage 4,800 (due to the identification of an artefact scatter near this location);
  - ▶ approach to road and rail tunnels, chainage 5,000 to chainage 5,500 (area is immediately south of the National Estate area. Middens already located in this area but adjacent to Broadwater margin. At chainage 5,000 the easement approaches to within 100 m of the wetland. Possibility of cultural material similar to that in National Estate area cannot be discounted, therefore it is advisable to test); and
  - ▶ the southern area from airport boundary (peg chainage 6,000 to chainage 6,700) and the junction with the Tweed Heads Bypass (assessed as highly sensitive – possibility of burials in this section cannot be discounted).

It is suggested that a diesel powered sand augur is used to its maximum depth (at least 2 m) at intervals of approximately 50 m to determine the presence of cultural materials. For work undertaken within NSW, a preliminary research permit under Section 87 of the NSW *National Parks and Wildlife Service Act 1974* would be required prior to the commencement of any auguring.

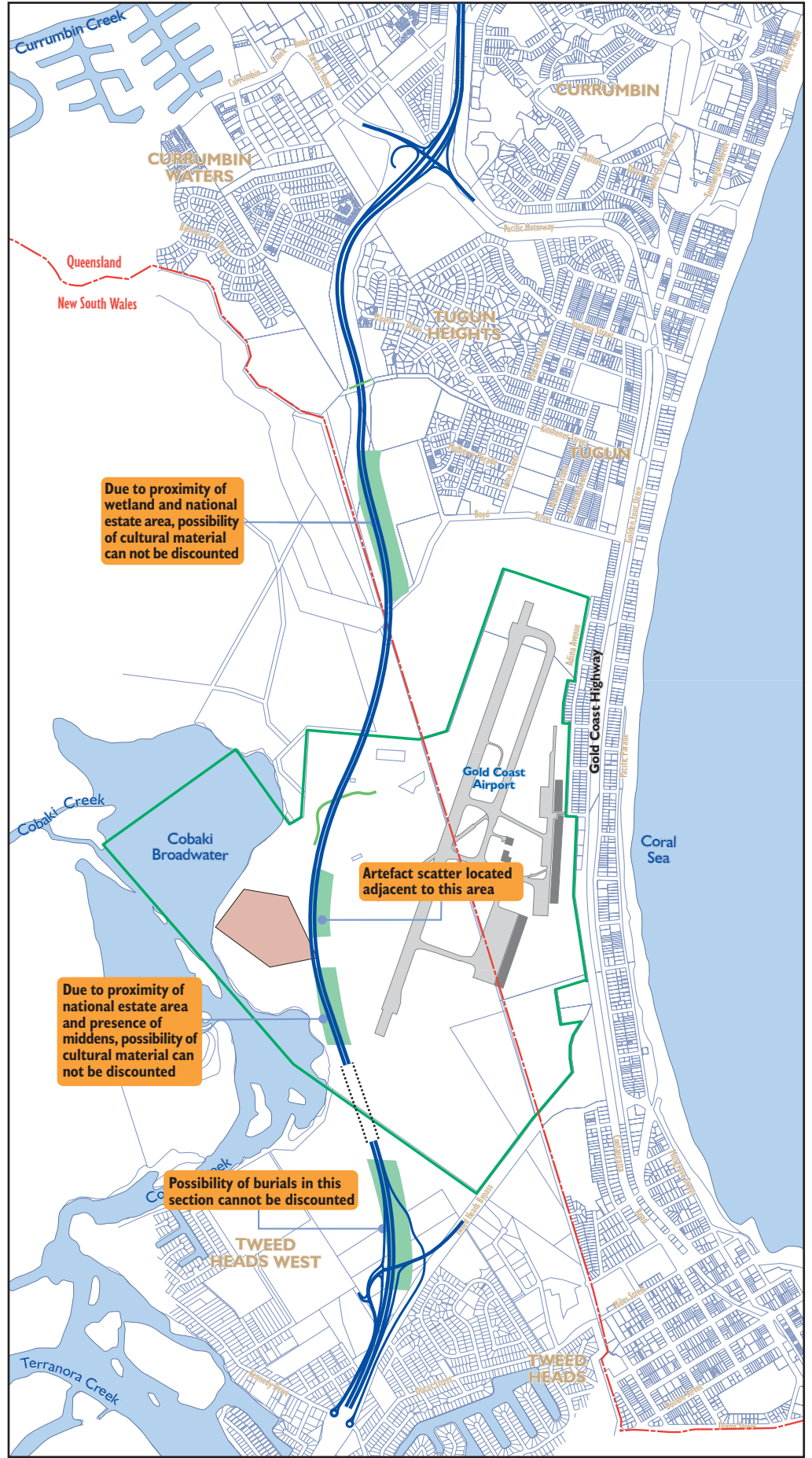
If such materials are identified, further open area excavation and salvage may be required. This would be undertaken only after consultation with the appropriate Traditional Owners, the proponents (Main Road and the NSW Roads and Traffic Authority) and depending on jurisdiction, the NSW National Parks and Wildlife Service, Department of Environment and Conservation, Queensland Environmental Protection Agency, Commonwealth Department of Transport and Regional Services and Gold Coast Airport Limited.

If salvage were required it would be necessary to develop appropriate research design and to apply for the relevant State permits regarding removal of cultural material. These are:

- ▶ an application to excavate/collect items of the Queensland Estate under the *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*; and
- ▶ a consent to destroy under Section 90 permit under the *National Parks and Wildlife Act 1974*.

A plan for curation of the material, after analysis and reporting is completed, would be required. This would include the designation of an appropriate keeping place. This work would be undertaken only after consultation with the appropriate Traditional Owners, the proponents and depending on jurisdiction, the NSW National Parks and Wildlife Service, Department of Environment and Conservation, Queensland Environmental Protection Agency, Commonwealth Department of Transport and Regional Services and Gold Coast Airport Limited.

A report covering the testing work would be prepared and discussed with the Traditional Owners.



Due to proximity of wetland and national estate area, possibility of cultural material can not be discounted

Artefact scatter located adjacent to this area

Due to proximity of national estate area and presence of middens, possibility of cultural material can not be discounted

Possibility of burials in this section cannot be discounted

- Proposed Tugun Bypass
- Gold Coast Airport Boundary
- - - Queensland/NSW Border
- Proposed Access Bridges
- ⋯ Tunnel
- Areas to be Tested for Sub-Surface Deposits (2m in depth)
- National Estate



Figure 4.4 Areas Along Proposed Transport Corridor to be Tested for Subsurface Deposits

## 4.5 Summary

### 4.5.1 Known Sites in the Vicinity of the Proposed Bypass

The types of archeological sites found in the general area and within the study area are detailed in Chapter 3. These sites include a now destroyed bora ground, recorded shell middens and artefact scatters. The area has received a high degree of disturbance but intact middens survive in the National Estate area.

The National Estate midden complex is of particular importance. It has outstanding value to the local Aboriginal community as an educational resource and has intact cultural deposits, which have considerable archaeological research potential. It is also the only estuarine midden complex on the Tweed, which still retains much of its former environmental context.

The footprint of the proposed alignment extends beyond the boundary of the National Estate area by approximately 0.35 ha. The intrusion of the proposed footprint into the National Estate area is within the previously disturbed area of the site remaining outside the fenced-off vegetated area.

Section 30 advice (*Australian Heritage Commission Act 1975*) has been received from the Australian Heritage Commission in relation to the potential affect the proposed bypass is likely to have on the National Estate area. They have indicated that they have no objection to the proposal provided there is provision for work to stop and the significance of the material to be assessed should intact midden deposits or other finds that are significant to the Aboriginal community be uncovered.

This material and the known sites which flank the Cobaki Broadwater to the west of the National Estate precinct are excluded from the proposed transport corridor development area but other sites in the study area can be considered in association with this complex. However they occur in highly disturbed contexts especially within the airport boundaries and are generally assessed as having low scientific/archaeological significance.

The Traditional Owners consider all the sites to be of high cultural/social significance. In their understanding, the artefacts and middens whether in situ, disturbed or displaced, reflect generations of use by Kombumerri and Minjungbal forebears and all form an integral part of the cultural landscape, which is considered worthy of protection and preservation (Collins 1999: 27 and 41).

### 4.5.2 Survey

Survey of the proposed corridor was undertaken with the appropriate Traditional Owners and no new sites were located. One of the previous recorded sites was found during the survey to lie within the proposed footprint. The management of this site will be negotiated through the cultural heritage management plan. However, four areas along the corridor have been identified as having high or moderate sensitivity based on environmental setting and degree of disturbance.

The area south of the John Flynn Hospital and Medical Centre has moderate sensitivity. This portion is located on the lower slopes at the western edge of former wetlands. The area appears to have had slight impact (e.g. clearing) and its proximity to the wetlands

(resource area) makes it possible that cultural materials may still be present though covered by alluvial and colluvial processes.

The only area of potential high sensitivity is located at the southern end of the corridor in the vicinity of the proposed Tweed Heads Bypass interchange. This area has experienced less impact than any other portion and is characterised by sand deposits between the river and the coast. Stories of a burial (grave) in this region cannot be discounted.

Few sites are expected to occur in the disturbed areas, which make up the majority of the proposed corridor. Shell middens could occur but they are likely to have been disturbed and examples of this type of site are preserved in the National Estate area. It is possible that any midden sites, which may be found inadvertently, can be managed through consultation and mitigation.

**Only one known disturbed scatter was relocated within the footprint. There is no physical evidence of the existence of other sites which would constitute significant constraints to the proposed development.** There is no unequivocal evidence from the consultation and the survey that any known significant sites will be disturbed. The possibility of undiscovered middens and artefact scatter occurring subsurface must be considered and procedures to accommodate that occurrence during construction should be put in place in the cultural heritage management plan.

The likelihood of burials occurring must be taken into consideration in the assessment of the final alignment as the general area is typical of where such sites occur in coastal situations. However the degree of disturbance, which has already occurred along major portions of the corridor, suggest that those areas will have a **low potential** for **burials** to occur.

There is still expressed concern by the Kombumerri and the Nganduwal people that the development has the potential to disturb sites. A major issue which might need to be addressed during construction would be the discovery of burials. The incidence of burials cannot be predicted from surface inspection or random subsurface testing, however, the likely occurrence of burials is rated as low to moderate along the heavily disturbed areas of the route such as Gold Coast Airport lands, the Tugun Landfill and in the vicinity of the John Flynn Hospital and Medical Centre.

The southern area has a moderate likelihood of burials being uncovered, There is an unsubstantiated report of a burial close to an old house on the Tweed Heads Pony and Hack Club and an opinion stated by Jacki McDonald that burials might occur in the general area. The terrain in the southern area is generally low and flood prone. Indigenous burials are usually located on dunes elevated above flood areas (e.g. Broadbeach burial ground). The beach ridges typical in this area would have been likely locations of burials. However burial locations were often deliberately chosen according to particular needs and not all dunes were used. Striking any burials in this location would be random and unpredictable.

No non-Aboriginal historical sites were located during the study.

Recommendations concerning the management of material, which may be inadvertently exposed or discovered, are made in Chapter 5.





## 5. Conclusions and Recommendations

### 5.1 Concluding Comments from Traditional Owners

During 2001 a copy of the draft report was distributed to:

- Tweed Byron Local Aboriginal Land Council;
- Ngarang-wal Aboriginal Land Council;
- Kombumerri Aboriginal Corporation for Culture Yugambeh Museum, Language and Heritage Research Centre; and
- Nganduwal Language Group.

Comments from these groups regarding the proposed transport corridor are summarised in Table 5.1.

**Table 5.1: Traditional Owner Comments on the Proposed Tugun Bypass During 2001**

Contact	Group	Comments
Ysola Best	Kombumerri Aboriginal Corporation for Culture Yugambeh Museum, Language and Heritage Research Centre	<ul style="list-style-type: none"> <li>▪ Her previous comments (Table 1.2) referred to the route selection process, where several alternative were presented to her. Her present position is that provided things remain as described to her, she has no problems with the proposed alignment.</li> </ul>
Jackie McDonald	Nganduwal Language Group	<ul style="list-style-type: none"> <li>▪ Jackie McDonald reiterated the significance of the area due to the historical presence of a camp which was well documented by early explorers who saw the camp fires. She restated the presence of the bora ground and scarred trees and that her uncles had earlier encountered artefacts in the study area and expected the presence of burials and more artefacts. She indicated the need for monitoring during project.</li> </ul>

At a meeting held on 14 April 2003, Graham Dillion (Kalwun Development Corporation) expressed his support for the project. He was keen to see revegetation occurring along the route, particularly with food and resource plantings.

In addition to these groups, a number of other Traditional Owner groups from the wider region have been identified who may wish to provide comment on the proposal. In recognising this wider community interest, these groups have been provided with the opportunity to comment on the proposal. A contact letter, map and 1800 number were provided.

### 5.2 Recommendations

**Recommendation 1:** Should the project be approved, pre-construction protocols in the form of a cultural heritage management plan would need to be developed in consultation with the Traditional Owners to deal with any existing or new material that might occur during pre-construction and construction. This is particularly important

with respect to the potential discovery of burials. The cultural heritage management plan would include statements indicating that works would cease immediately if any material of a potentially sensitive nature was uncovered. The cessation of works would be temporary but of sufficient duration to ensure advice is obtained from the Queensland Environmental Protection Agency and/or NSW National Parks and Wildlife Service, Department of Environment and Conservation, depending on jurisdiction and that Traditional Owner's reasonable wishes for the handling of the material are accommodated.

**Recommendation 2:** During the proposed pre-construction and construction phase a Community Involvement and Complaint Response Plan should be developed which includes specific procedures for response to cultural heritage matters. This plan should include:

- establishing a 24 hour enquiries contact telephone number during periods when nightworks are to be undertaken. At other times the enquiries line would operate during normal business hours with an out of hours answering service;
- recording details of enquiries on a enquiries register;
- developing procedures for a quick response to enquiries by a suitably qualified person (e.g. a qualified archaeologist); and
- wide advertising of the telephone number and advertisement of when activities are to occur.

**Recommendation 3:** Prior to any ground clearance the following areas (Figure 4.4) should be tested by auguring or shovel pit testing for subsurface deposits:

- the western edge of the wetlands between centreline pegs chainage 2,500 and chainage 3,200;
- recorded site chainage 4,600 to chainage 4,800;
- the approach to road and rail tunnels chainage 5,000 to chainage 5,500; and
- the southern area from airport boundary (chainage 6,000 to chainage 6,700) and the junction with the Tweed Heads Bypass.

The recommendations and requirements for further work and the precise technical activities, which would be undertaken during proposed pre-construction and construction would be discussed in full.

**Recommendation 4:** The National Estate midden complex has outstanding value to the local Aboriginal community. It is recommended that activity within the National Estate is kept to an absolute minimum. There should be no disturbance within the fenced-off, vegetated area of the site. In line with Section 30 advice received from the Australian Heritage Commission in relation to the effect the proposed bypass is likely to have on the National Estate area pre-construction and construction protocols developed as part of the project should include stop work provisions should intact midden deposit or other finds that are significant to the Aboriginal community be uncovered. These procedures would be developed in the cultural heritage management plan.

**Recommendation 5:** If any unexpected non-Aboriginal cultural heritage items are encountered during the course of construction works, works should temporarily cease and the Queensland Environmental Protection Agency and/or NSW Heritage Office be contacted, depending on jurisdiction. An excavation permit may be required under Section 140 of the NSW *Heritage Act 1977* before the works can recommence.

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## **Legislation**

### **Commonwealth**

*Aboriginal and Torres Strait Islander Heritage Protection Act 1984 – 1986.*

*Aborigines Protection and Restriction of the Sale of Opium Act 1897.*

*Airports Act 1996.*

*Airports (Environment Protection) Regulations 1997.*

*Australian Heritage Commission Act 1975.*

*Native Title Act 1993.*

### **NSW**

*Aboriginal Land Rights Act 1983.*

*Heritage Act 1977.*

*National Parks and Wildlife Act 1974.*

### **Queensland**

*Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987.*

*Queensland Heritage Act 1992.*





## **Appendix A**

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Addendum: Inspection of Southern  
Portion of Route





## Addendum: Inspection of Southern Portion of Route

### 1 Introduction

An inspection of the proposed Tugun Bypass route between centreline point 1 and 20 in NSW was undertaken on 6 June 2001 (Figure A1.1 and Table A1.1). E-mail notification of the inspection was provided to the NSW National Parks and Wildlife Service Project Manager for the Tugun Bypass, Mr Liam Dagg and confirmation received by e-mail on 5 June 2001. Ms Lindy Smith of the Tweed Pony and Hack Club was informed of the proposed entry via Tweed Heads Pony and Hack Club land by phone on 5 June 2001.

#### 1.1 Purpose

The purpose of the inspection was:

- to confirm visibility conditions and terrain in this heavily wooded section of the route;
- to determine likely presence of scarred trees; and
- to inspect a shell scatter located between points 12 and 13. This scatter had been identified in previous flora surveys and an identification of its potential cultural status was required.

The following assessment is based on a consideration of the area in accordance with agreed criteria for assessment of shell middens: *Shell Middens on the Central Coast of NSW: A Discussion of Problems in Distinguishing Natural Shell Deposits from Cultural Shell Accumulations* (Bonhomme 1999).

#### 1.2 Method

A foot survey of the area between point 1 (E550377/N6882966) and point 20 (E551174 N6882434) was undertaken by Dr John Craib and Theresa Bonhomme of Bonhomme Craib & Associates. (Figure A1.1)

#### 1.3 Observations

- Visibility throughout the area was confirmed as generally 0 percent.
- The terrain consisted of low sand dunes between points 5 to 20 and low-lying swampy flats between points 1 and 5. The extreme north-western section has been previously cleared and now has regrowth.
- There was evidence of European occupation in the form of dumps and relict fencing.
- Drainage of the area between points 12 to 20 has been undertaken and small canals/drains cross the area.
- Buff coloured dunes line the drainage areas and hummocks of sand are piled up adjacent to the drains. This is common between points 12 and 16.
- Vegetation was dense with some larger trees present. No obvious traditional scarring on any trees was found.
- A scatter of shell was found on a low disturbed dune adjacent to a drainage channel (E550856/N6882730 and E550944/N6882690).
- The dune was clean buff coloured sand. Other less disturbed dunes in the area show a grey to black upper organic unit over white sand (typical of podsollic soils).

- The dense shell extended over an area of at least 40 m north south to 20 m east-west. Scattered sparse shell was observed on this sand deposit over a distance of 50 m to the south of the dense scatter.

The shell was assessed according to the following criteria (Bonhomme 1999: 229-233):

1. Degree of selection – this criterion identifies the range and numbers of shellfish species present, the proportion of each species, the source habitat of the species, the presence of non-economic species and the size of shells within the individual shellfish species.
2. Condition of shell – this concerns factors such as the presence absence of articulation of shells, whether the shells are water worked or unbroken, fracture patterns and evidence of burning.
3. Presence or absence of non-shell material in the deposits – such material included charcoal burnt wood pumice, marine shell grit hearthstones and Aboriginal artefacts. The presence of the latter, which could not occur naturally, is considered to be a good indicator of an Aboriginal midden. However, absence does not necessarily preclude it from being a midden.
4. Stratigraphy – most Aboriginal middens have one or more clear and compact shell lenses of varying depth.
5. Location – middens are usually located close to the source on the first available flat ground. Shell is carried a distance from the source but not in great quantities.

#### **1.4 Comments**

- The scatter was located along a dune immediately adjacent to a drain.
- The sand had been reworked in parts into dump heaps (Figure A1.2).
- The scatter consisted of a range of types of shell including pipi, oyster, whelk and Anadara. Snail shells were present.
- The size range varied from large adults to small juveniles and a mix of shell grit (Figure A1.3).
- Visual observation suggested small whelk dominated. Oyster shell and pipi were not common.
- All of the shell fish species represented are known to have been consumed traditionally.
- The shell types are all relatively common in the area and their source habitat except for the pipi was close by.
- No stratigraphy was observed.
- No artefacts of Aboriginal origin were found.
- Some recent European material (plastics, styrofoam) was found on the surface of the dunes.

#### **1.5 Conclusion**

- No scarred trees were observed in this section with the exception of those previously reported in the draft report.

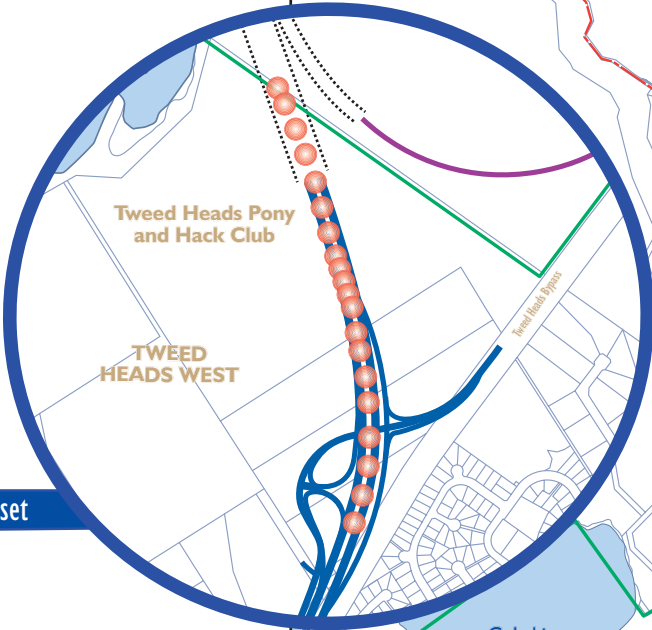
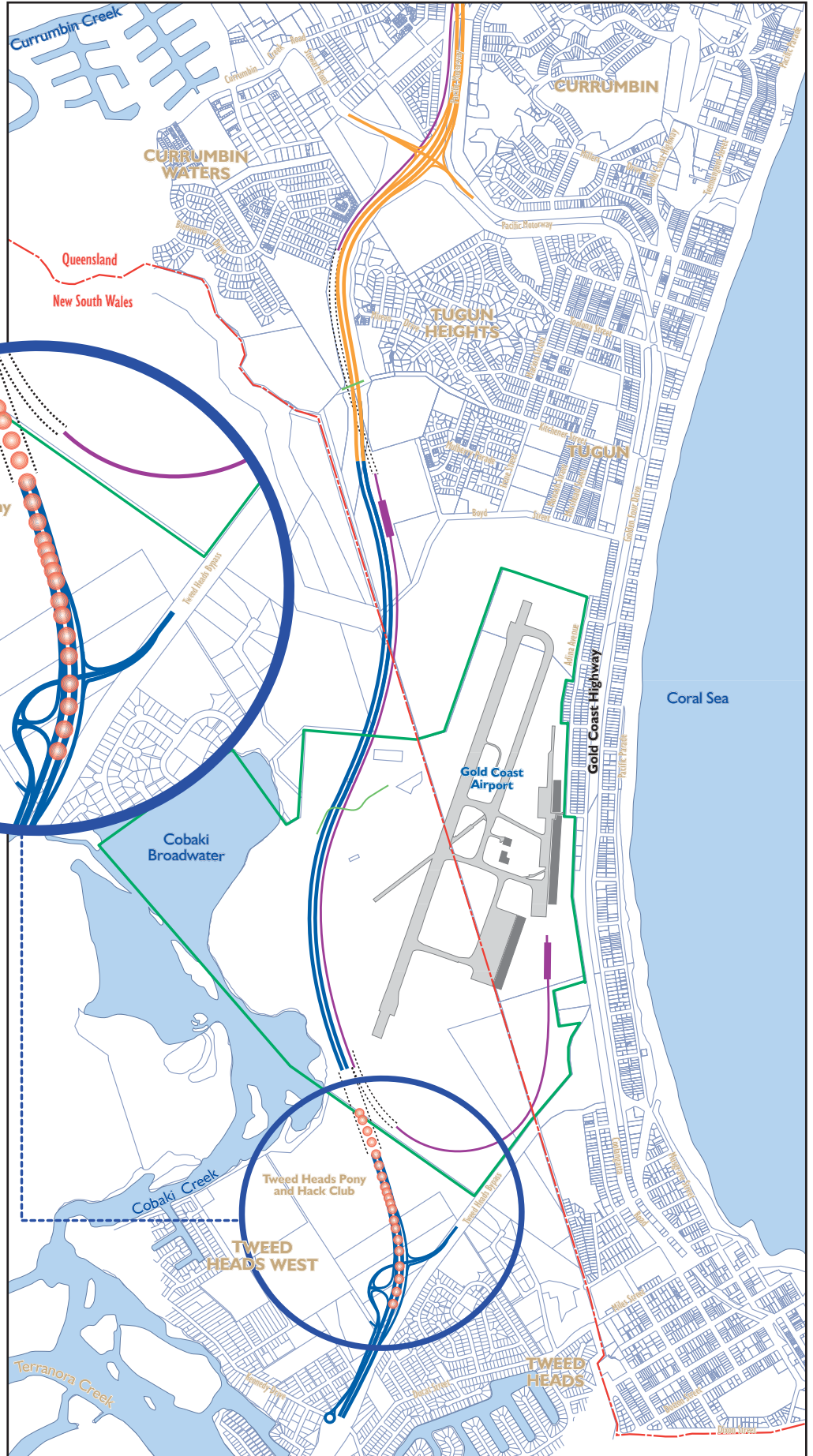
- The draft report reported that immediately adjacent to the house two scarred trees probably of non-Aboriginal origin were located. The axe marks and shape of the scars suggested Aboriginal persons did not make these scars.
- The location and contents of the scatter are suggestive of a natural shell deposit which has been re-deposited on the dune. It is not considered to be Aboriginal in origin.

## **1.6 Recommendation**

One of the proposed test bores should be located at this dune to document the stratigraphy of the dune and the depth of the scatter.

## **References**

Bonhomme, T. 1999 *Shell Middens on the Central Coast of NSW: A Discussion of Problems in Distinguishing Natural Shell Deposits from Cultural Shell Accumulations*. Australian Coastal Archaeology, Eds Jay Hall and Ian. J. Mcniven ANH Publications, Department of Archaeology and Natural History RSPAS. The Australian National University, Australia.



Inset

- Proposed Stage 1 Tugun Bypass
- Proposed Stage 2 Tugun Bypass
- Proposed Rail Extension - Robina to Gold Coast Airport
- Proposed Rail Stations
- Gold Coast Airport Boundary
- Queensland/NSW Border
- Proposed Access Bridges
- Tunnel
- Centre Point Locations



Figure A1.1 **Proposed Tugun Bypass Alignment - Airport Boundary to Tweed Heads Bypass**

**Table A1.1: Eastings and Northings for 20 Locations Along the Centreline of the Proposed Alignment**

	<b>Eastings</b>	<b>Northings</b>
1	550377.8	6882966.1
2	550411.1	6882949.7
3	550464.7	6682923.3
4	550510.2	6882900.9
5	550556.6	6882878.1
6	550597.7	6882857.9
7	550645.4	6882834.4
8	550695.5	6882809.8
9	550722.8	6882796.3
10	550748.4	6882783.7
11	550776.3	6882770.0
12	550808.6	6882754.1
13	550845.9	6882735.1
14	550872.6	6882720.2
15	550933.7	6882681.5
16	550980.5	6882646.7
17	551035.8	6882599.0
18	551087.4	6882546.6
19	551130.3	6882495.6
20	551174.1	6882434.4



**Figure A1.2: View South Across Scatter**



**Figure A1.3: Closeup of Scatter Showing Range of Species and Size and Fragmentation of Shell**